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Start with Engl. page

STOP-COCK JIM.

BY CHARLES H. OLIVER.

REPUBLISHED IN RESPONSE TO NUMEROUS REQUESTS.

SYNOPSIS OF PRECEDING CHAPTERS.

Jim Cummings, known as "Stop-Cock Jim," the hero of this story, was a pipe line gauger, who came to Petrolia, Pa., during the early days of the oil excitement there. He was a mild-mannered, gentlemanly fellow, but every inch a fighter, and, if occasion demanded, was quick to use his fists. He was also an amateur boxer of note. His first night in Petrolia he knocked down Big Red Mullin, the bully of the town, for striking a crippled newsboy. The newsie proved to be the brother of a young lady whom he had protected from the insults of a burly Englishman two years previously, on a Valley train, while en route from Oil City to Pittsburgh. Miss Moore, the young lady in the case, had been constantly in his thoughts, since the occurrence, but he had never seen or heard of her until they met again through his defense of her brother. Cummings was advised to leave town to escape Mullin's vengeance, but when he showed a disposition to meet Red and fight it out, a fight was arranged, to be fought according to prize ring rules.

WHILE Stewart and Nolan were talking, Johnny Patch and a few of his friends were holding a secret meeting in a room over Fox's saloon and poolroom across the street.

"How soon will Red be here?" asked Patch.

"He left Oil City this morning," said Fox. "It is his intention to stop off long enough in Parker to pay one crew he has working there on a cleaning-out job. Then he will drive over from there, and should be here by six or seven o'clock this evening."

"How much money have you got out so far?" asked Patch.

"I think about twelve or fourteen thousand dollars. Some of it at odds of eight to one. We can't get many people to place their money against Red. Most everyone thinks the fight won't last one round."

"Well, get all you can up at any odds. Here comes Red now." Presently Big Red walked into the room, but before he could sit down Patch called him and they went into an adjoining room and closed the door.

"Well," said Patch, "we have everything ready, but cannot get much money up. We have about fifteen thousand dollars in the pool yet and don't seem to be able to place it."

"I brought eighteen hundred over with me," said Red, "to pay the boys, and I think I might as well use it. I'll turn it over to you."

"No, give it to Fox," said Patch, "everybody knows he has charge of our end of the money and will come to him to place their bets. I don't think you can do better than eight to one."

"I don't blame them," said Red; "it will be like taking candy from a baby. I've agreed to tie one hand behind my back."

"You'll do nothing of the kind," said Patch; "you will get to him and finish him as quickly as you can. There will be no foolishness. I only hope we can get the rest of the money up. Shorty Milliron and Long Shorty Ryan will be in your corner. I don't think you will have any use for them, but it will look better to have some one there. Ben Hogan has agreed to act as referee, and he knows every point of the game. I went over to see Nolan, who is acting for Cummings; he'll be one of the men in Cummings' corner. He

says Hogan is satisfactory to him. I think everything is arranged; all we want to do now is to get the rest of the money up."

Fight was the talk of the town this Friday evening; even the boot-blacks and newsies were betting their nickels and dimes at terrible odds, for it was a foregone conclusion that the fight would go to Big Red, so the boy who was willing to take a chance on the other man got all kinds of odds. The stage from Parker was a little late this particular evening, owing to a wreck on the Valley Railroad.

"Here she comes!" cried one of the little boot-blacks, and swinging around the corner of Argyle street on to Main street came the six horses on a dead run. With a flourish of his long-lashed whip and a loud "Whoa!" the stage stopped in front of the Central Hotel. There were only a few passengers, one among them, a rather short, nervous looking man. He looked to be about forty years old. His sharp eyes seemed to take in everything at a glance. He looked the alert, quick-to-decide business man. Walking into the hotel, he asked the clerk for a room; as the clerk shoved the register towards him, he tooks two sealed packages out of his satchel, handed them to the clerk, and said:

"Please put these in the safe until morning." He then wrote on the register, Quincy G. Smith, Titusville, Pa., handed his satchel to the porter, told him to get the key and take it to his room. Then he walked out to the barroom and when Paddy stepped up to serve him, anyone watching closely could have seen him wink one eye at Paddy. He called for a drink of whiskey, and as Paddy set the bottle and glass down, said in a low tone:

"Come up to my room as soon as you can get off."

"Yes, very nice evening," said Paddy, in a loud voice, as he set the bottle back on the shelf.

"The stranger stepped back into the office.

"Do you know who that was?" asked one of the men standing at the bar.

"You can search me!" said Nolan.

In a few minutes Paddy called to his assistant: "I am going out for a while." He took off his apron, put on his coat, passed out through the office, up the stairs, knocked at Mr. Smith's door, opened it, walked in and then closed it.

"Glad to see you, Nolan," said Smith, reaching out his hand. "I want you to explain the situation to me, as I am all in the dark."

"All right," said Paddy, "but speak low, as these partitions are only thin boards and what we have to say we don't want any one to hear. Jim will not get in until late tonight, as he wants to clean up everything in the district, so he will not have anything to do tomorrow.

Paddy then proceeded to tell Mr. Smith all that had happened that had led up to the fight.

"I suppose Jim told you about sending me the message?" said Mr. Smith.

"Yes, he told me about that.

"Well, I have brought about four thousand dollars with me. Do you think we can place that much?"

"Yes, I don't think there will be any trouble about that. I think you can place every dollar of it at odds of from six or eight to one."

"You don't mean to say they are giving odds like that!"

"Yes, they are, and very few takers at that."

"Well," said Mr. Smith, "what a killing! I think I had better divide up that money, so they will not know it's all coming from one place. I know three or four of the boys

here in town. I will get them to place about five hundred a piece. Then there is Jesse Moore, in Cram's newsroom. I will have him place about four hundred. I think I have about six hundred with me; the rest I left down in the office safe. You take this six hundred; better place it tonight, if you can. You know the people holding the money to be all right?"

"Yes, we looked after that part of it. All the big bets are placed in the bank."

"Have you bet anything yourself?"

"Yes, every dollar I have is up. I have a diamond ring and a stud I think I can get three hundred on; would you advise me to do it?"

"I certainly would!"

Mr. Smith drew a roll of bills from his pocket, counted out six hundred dollars and handed them to Paddy.

"As soon as Jim comes in, send him up to my room. You come, too, but don't come together."

When Cummings came in, he spoke to Nolan and went on up to Mr. Smith's room; in a few minutes Paddy followed him. They talked for about an hour, going over all their plans. At the end of that time Mr. Smith said, "I understand the situation and with your permission and Nolan's, will take charge in the morning. Now, boys, let us get to bed, as tomorrow will be our busy day."

Saturday proved to be an ideal May day. The town was astir early. Jim woke up at six o'clock, had Prince hitched up and drove out to the station to take his gauge and make out his stock report. He was back and had his breakfast at seven-thirty. After that he went to Mr. Smith's room, knocked on the door, opened it, and went in. Mr. Smith had just finished dressing.

"Good morning, Jim, how do you feel?"

"If I felt any better, I would have to take something for it," laughed Jim.

They talked for a few minutes, then Jim went to his own room. Mr. Smith went down stairs into the bar-room and asked for Paddy. He was informed he would not be on duty that day, as he was connected with the big fight. For some reason almost everyone called it the big fight. Mr. Smith asked for a little whiskey, drank it and went into the dining room. After eating his breakfast he went to the office and asked the clerk for the two packages he had in the safe, and after receiving them returned to his room, opened them and counted the money. Then he took a large pocket-book from his inside pocket, put in the bills, which were of a large denomination, a few twenties, but mostly fifty and one hundred dollar bills, returned down stairs, passed the office, out on to the street and stood looking around for a few minutes. Then he crossed over to Fox's pool room and entered the bar-room. Mr. Fox, himself, was back of the bar. Mr. Smith smiled and asked for a good cigar.

"I would like a large, black cigar, if you have it. I don't see anything over at the hotel that I care for."

"What price cigar would you like?"

"Oh, I think about a quarter would be all right."

"I have a good cigar here for a quarter," said Fox, "but if you want a real smoke, here is something for thirty-five cents, or three for a dollar, that cannot be beaten for the money; I know, for I smoke them myself."

"All right," said Smith, "I'll take three of them." He lit one of them, turned his back to the bar,

smoked for a minute, then turning to Mr. Fox, said:

"I understand there is going to be quite a fight here this afternoon."

"There is to be a fight, but I don't think it will amount to much, as the one man is so far outclassed by the other that the general opinion is he won't stand any show."

"Do you mean the one they call 'Stop-Cock Jim ?' "

"Yes."

"Well, I saw him around the hotel last night and he looked pretty good to me."

"Well," said Fox, "if you have any money to back your good opinion of him, you won't have any trouble in placing it at big odds."

"What do you mean by big odds?"

"Why, I have about eighteen or twenty thousand in my hands that we are willing to place against Stop-Cock Jim at seven to one."

"Who hold the stakes?" asked Mr. Smith.

"We have an official stake-holder over at the bank."

"Well," said Mr. Smith, "I'll take twelve hundred dollars of it and take Stop-Cock Jim at one to seven."

Mr. Fox was staggered for a second. Mr. Smith counted out twelve hundred dollars on the bar. Mr. Fox went to the rear of the room, got a check book and said:

"If you will step over to the bank we will accommodate you."

They went into the bank and Mr. Fox asked for Mr. Wilkens. Then he walked on back into a small office in the rear of the bank. He made out a check for eight thousand four hundred dollars and handed it to Mr. Wilkens.

"We are betting seven to one on Red Mullin winning the fight this afternoon."

Mr. Smith handed Mr. Wilkens twelve hundred, saying:

"I am betting this amount, at one to seven, that Stop-Cock Jim wins the fight. This is all, excepting I would like to have you certify that check."

"Certainly," said Mr. Wilkens, and he went back of the counter, returning in a few minutes and handed the check to Mr. Smith, who looked it over and handed it back; after which Mr. Wilkens made a record of the bet, which he read to them.

"Well," said Fox, as he shook hands with Smith, "may the best man win."

"I think he will," said Smith."

"By the way," said Fox, "I don't believe I got your name."

"Smith, of Titusville."

From the bank he walked up past the Pipe Line office to Backus' Oil Well Supply Store, went in and asked for Mr. Lew Miller, who was clerk in the store. In a minute Mr. Miller came out of the office, walked up to Mr. Smith, looked at him for a few second, then held out his hand, saying:

"It is so dark in here I couldn't tell who you were at first. Glad to see you, Mr. Smith, and how is Titusville ?"

"I'm all right, and so is the town. How is Mrs. Miller and the little Millers ?"

"All well, thank you," Smith."

"Now, Lew, I'm in a hurry. I'll come up before I leave town and have a little visit with you. I want to talk to you privately for a few minutes now."

"Just step back into the office," said Lew, "there is no one there now."

They went back and Lew closed the door.

"Here," said Mr. Smith, "is one thousand dollars. I want you to get some one whom you know to be all

right and give him half of it to bet on the fight. You place the other half yourself at Fox's pool room; they are betting seven to one on Red Mullin. You take the Stop-Cock Jim end of it. You understand?"

"Yes, but Mr. Smith, that young fellow won't stand any show against that big brute."

"Now, Lew, you know me and you know I generally know what I am doing. If you have any loose money, get into the game. I am at the Central Hotel. If convenient, report to me before dinner."

As soon as Paddy got his breakfast he went back to the barn where he was joined by Shorty, Mullin's tool dresser. They got a team and light wagon, drove up to Backus' and got eight pieces of two-inch pipe about eight feet long, with a tee screwed on each piece. A long piece of sand pump line, some sacking and a bunch of waste to pad the poles. They drove up to the grove and measured the ground for the ring, drove in the pipe, stretched the sand line from one tee to the other, then took the waste and sacking, padded the poles and the ring was ready.

At ten o'clock Johnny Patch came into Fox's place, passed through the bar-room and went upstairs, where he found Red Mullin and a half dozen of his backers.

"Well, Red," said Patch, "everything is in shape." Just then Fox came in.

"Well, every dollar that we have in the pool is up, including Red's eighteen hundred. I think we gave too much odds, but that was my orders, and I obeyed orders."

"Well, that was the only way we could get any money up," said Patch.

"You must have gotten it up in a hurry; you had about twenty thousand last night."

"Yes, Nolan came in late last night and put up nine hundred more. Then some fellow from Titusville placed twelve hundred this morning. Then I got three other bets of five hundred since that time."

"Well, a fool and his money are soon parted," said Patch.

All forenoon people had been coming in from the surrounding country. The streets of the town looked like a Fourth of July celebration or a Firemen's parade day. The fight was scheduled to take place at two-thirty p. m. Just before noon Patch and Fox drove up to the bank. Patch drove what he claimed to be the best team of horses in Butler county; dark bays, and they were beauties. It was claimed that he had refused eight hundred dollars for them. A few minutes before "Stop-Cock Jim" had driven up to the Pipe Line office, hitched Black Prince and gone in. When Patch got out of the buggy, he caught sight of Prince; he walked up in front of the Pipe Line office and stood looking at the horse.

"I call that some horse!" he said to Fox. "Who does he belong to?"

"I don't know," said Fox.

Just then Jim came out of the office, walked up to Prince and was about to untie him, when Patch asked him:

"Does he belong to you, Cummings?"

"Yes," said Jim, "I've owned him for a couple of years."

"Do you want to sell him?" asked Patch.

"No," said Jim, "he is not for sale."

"How would you like to bet him against my team on the result of the fight?" and he winked at Fox.

"Do you mean that team of bays standing in front of the bank?"

"Yes."

"You are on," said Jim; "come

into the bank and we will put it on record."

"I like your nerve, young man," said Patch, and they went into the bank. When they were coming out, Mr. Smith was just passing. When Patch caught sight of him, he stepped forward and, reaching out his hand, said:

"How are you, Q. G.?"

"Glad to see you, Patch," said Smith; "I will see you in a minute. I want to speak to Mr. Cumimngs."

He joined Jim and they walked up toward the Pipe Line office, talking in a low tone.

"Who is this man Smith?" asked Fox.

"Smith," said Patch, "is one of the greatest sporting men in the country. Spends part of his time in Cleveland and part in Titusville; owns a string of horses, is interested in refineries in both Cleveland and Titusville.

"Well, that's the man that put up the twelve hundred dollars this morning. He was in again about half an hour ago, looking for some more."

"The devil!" said Patch. "Say, Fox, I don't like that. It doesn't look good. Well, I will call for you after dinner and drive you up to the grove." Then he stepped into his rig and drove toward the barn. He seemed to be in deep thought as he drove along.

Right after dinner almost every man and boy in town started for Shakley Grove. The place selected for the ring stood in a clearing in the grove and at one time had been used for a dancing platform. By two o'clock the grove was full of rigs and one could see people coming from all directions. A few minutes afterwards Red Mullin, Shorty Milliron and Long Shorty Ryan arrived in a two-horse rig. Right behind them came Patch and Fox. By twenty-five minutes after two o'clock there were fully fifteen hundred people on the ground.

"What did I tell you?" said Red to Patch. "That 'Stop-Cock Jim' hasn't shown up yet and that isn't the worst of it—he won't!"

"I'm afraid he will," said Patch.

"Afraid? What the devil do you mean?"

"I'll tell you in an hour from now." Just them Smith and Nolan drove up; behind them came Cummings, with a stranger and Rusty. Jim had on a long duster, which he took off and threw back in the buggy. As he came toward the ring, Patch took a good look at him. He was dressed in a dark blue, one-piece gym suit, that reached to his knees and extended up with straps over the shoulders, leaving part of the breast, shoulders and arms bare. He wore a pair of light gym shoes.

"It looks to me," said Patch, that the more clothes he takes off, the bigger he gets. Look at his shoulders and arms!"

His skin was very white; there were no big bunches of muscle in sight, but at every movement one could see the muscles playing under the skin. He looked to be at least seventy-five pounds lighter than his burly opponent, who was now seated in one corner of the ring. Red was naked to the waist, having on a pair of pants and heavy shoes. His arms looked as large as ordinary men's legs; the muscles standing out in great bunches, not only in his arms, but breast and back as well. He looked, as Shorty Milliron expressed it, "as if he could lick his weight in wildcats!"

Jim elbowed his way through the crowd, stepped under the ropes and stood waiting. The referee, Hogan, stepped to the middle of the ring and told the fighters to come forward for instructions. Choice of

corners was decided by tossing a coin. Jim took head and lost, Mullin choosing the corner he had been sitting in. The fight was to go to a finish, or until one man was knocked out or threw up the sponge, and there was to be no striking in a clinch.

The men stepped back to their corners, after shaking hands. At this moment Lem Stewart and a companion drove up. Lem had been detained by getting interested in a poker game at the hotel and came very near getting in late. He managed to edge his way through the crowd and, getting directly back of Jim's corner, was almost up to the ropes before he got a good view of Jim; then his mouth went open with a jerk.

"Kristopher Kalumbus!" gasped Lem, "Lightning Jim!" He stepped back from the ring, mounted a convenient stump, and, displaying a roll of bills, cried:

"I'm betting on 'Stop-Cock Jim!' What do I hear?"

He heard a plenty, for in a few minutes all the money was up at good odds. The men were standing in their corners, waiting the signal to advance; Mullin scowling and Jim smiling.

"Watch me knock that smile clear around to the back of his head!" said Red.

"Now, Red," said Patch, "don't wait a second; get right to him and finish him as quickly as you can. Remember, you have eighteen hundred dollars up that doesn't belong to you!"

"We will be ready to go back to town in five minutes!" said Red.

Somehow Patch hadn't felt quite so confident the last three or four hours. The smooth-faced man, who was in Jim's corner with Paddy said to Jim:"

"Feel him out the first round!"

and then the gong sounded, and both men advanced to the center of the ring.

Mullin was the aggressor. He rushed at Jim and struck at him with his right, which, had it landed, certainly would have spoiled his smile. But, contrary to his expectations, when it got there, there wasn't anything to hit excepting thin air. It was the same way all through the round. Mullin was throwing his arms almost out of place, striking, and Jim was ducking and side-stepping, smilingly keeping out of his way.

The second round was a repetition of the first, except that Jim began to touch up Red a little; but not wishing to take any chance of running into one of Red's sledge-hammer blows, played safe, and in consequence his blows lacked force, but all the time he was studying Mullin's style. However light Jim's blows were, they goaded Red to desperation at not being able to land a counter blow in return, and he kept after his more agile opponent harder than ever, with the result that he exhausted his strength with the force of his own exertions. This was just what 'Stop-Cock Jim' was working for, and his plan of battle was succeeding admirably. Whenever Red showed any signs of slackening his pace, Jim would just touch him up at long range to get him to renew his onslaughts. Toward the close of the round Jim landed a stinging blow that cut Red's lip, which so enraged him that he sprang at Jim with such force, the blow failing to land, he went sprawling to the ground, Jim narrowly escaping his mad rush. Red was on his feet in an instant, striking out wilder than ever. The crowd laughed derisively. When the round closed, Red was perceptibly tired and more sullen than ever.

"I see he still has that smile," said Shorty, sarcastically.

"Why don't he stand up and fight like a man?" said Red; "I am getting leg-weary running after him."

Red didn't look quite so confident by this time. As for Patch, Red's stock had gone down fifty per cent.

The gong sounded for the third round. Jim stepped quickly to the center of the ring. The smile had left his face, and the feeling that the battle was about to begin in earnest crept over the crowd, which sat in silent expectancy. Red struck out savagely. Jim turned his head just enough to avoid the blow, and as Red's face came close to him, struck him with his right, bringing his knuckles across his face, cutting the skin from the cheek bone to the chin, and before the big fellow could recover, struck him again with his left, cutting the other side of his face in the same manner. Again Red struck out blindly, with the same result, and as his face came within range again, Jim threw his whole weight forward, his right shot out like a piston rod, caught Red full in the mouth. Not one man in a hundred could have kept his feet; as it was, Red's head went back with a jolt that made him dizzy. Just then the gong sounded, and it was well for Red that it did, for he was very groggy. There was not a sound for a second, as the men walked back to their corners, then away back in the crowd a shrill voice called out:

"Good a-boy, Jim!"

"My God! What a smash that was" said Red, as he spit out a couple of teeth; he was bleeding like a stuck pig.

"You didn't bring that rope along so we could tie your hand behind your back, did you?" asked Shorty. "What you want is another hand; one you can hold in front of your face all the time."

The gong sounded for the fourth round.

"I got his number all right," said Jim, as he started forward. The spectators were then treated to an exhibition of lightning movements such as they had never seen before. It seemed almost impossible to follow Lightning Jim's movements with the eye. He rained a succession of terrific blows on his burly opponent. Upper-cuts, swings and straight arm punches were delivered with telling effect, and when time was called, Mullin staggered to his corner, a badly battered and defeated man. His one eye was closed and his face was beaten to a jelly. Jim said something to Smith, who backed out of the crowd, called to Patch and asked him to throw up the sponge. Patch was willing, but when he spoke to Mullin, the latter refused, and when the gong sounded, Red rushed at Jim like a mad bull. Jim side-stepped him, then, turning like a flash, his right shot out and caught Red on the point of the chin. Mullin went down like a log and was counted out. In about five minutes he was able to sit up, and looking around in a dazed way, asked: "What happened to me?"

"You better ask what happened to us, you big stiff!" said one of the crowd, feeling his empty pocketbook.

"We're a nice bunch of sports!" said one of the crowd, "and to think we put our money up at odds of seven to one on that! Why, I don't think he ever touched 'Stop-Cock Jim'."

"I'm out two hundred," said a big, driller, "but I think it was worth every cent of it to see Red get his!"

Though feeling sore at their loss-

es, the majority of the spectators joined in the ovation given to Jim, who quickly made his way through the crowd to his buggy and pulled on his linen duster. He was soon joined by the stranger, Smith, Nolan and Rusty.

"Well, Jim," said the stranger, as they got into the buggy, "you haven't forgotten anything; you have it all yet."

Jim drove to the hotel, went up stairs and changed his clothes. Rusty, holding Prince, was the envy of the bunch of boys, who crowded around, talking over the fight. In the Central office Smith, Nolan and the smooth-faced strange man were discussing the fight. While they were talking, Patch came in and walked up to the group.

"Well, Q. G.," he said, "you certainly put one over on us this time!"

"Yes," said Smith, "it wasn't much of a fight. Mr. Patch, I want you to meet Prof. Clark, of Cleveland."

"Glad to meet you, Mr. Clark. You're the man who was in Cummings' corner with Nolan, are you not ?"

"Yes, Jim and I are old friends, and when I got a message yesterday evening from Mr. Smith, saying Jim was going to fight, I started at once for Petrolia. I didn't even know where the town was, until I got to the railroad station and asked the agent. I got in here at one o'clock and just had time to get some dinner and start for the grove. I was disappointed in the big fellow. He has the weight and muscle, but is about as fast as an ice wagon.."

"There were a lot of disappointed people," said Patch, "not that there is any sympathy for Mullin, for he is disliked by everybody, but we were all so sure the smaller man had no show. I don't think there will be much drinking in town tonight, as most of the boys are broke."

Patch turned to Nolan and said : "Paddy, tell Mr. Cummings he will find his team in Coffin's barn, and if he cares to sell it, I'll buy it." Then turning to Mr. Smith and Professor Clark, said: "I will have to bid you good-bye, gentlemen. I have a well in the sand out on the Garvin farm and must go out there."

"We'll probably see you again," said Mr. Smith. "Mr. Clark and I are going to spend Sunday with Cummings. He hasn't invited us yet, but we've invited ourselves."

As Mr. Patch went out, the clerk told Mr. Smith that Mr. Cummings would like to see Mr. Clark and himself in his room.

After they were seated and had their cigars going, Jim said to Mr. Clark.

"Professor, I want you to do something for me."

"All right, Jim, what is it ?"

"I want you to stay here over Sunday with me, and on Monday take little Johnny Moore back to Cleveland with you and put him in the care of Dr. Weber, as I want him to have the best medical treatment that can be given him.

"I certainly will do that," said Mr. Clark.

"Now if Mr. Smith will excuse us for a little while, I want to take you out and have you meet Mrs. Moore and her daughter. We will take Rusty out along."

Mrs. Moore and Sis were sitting out on the front porch, when Mr. Clark, Jim and Rusty drove up. Rusty was the first one out and went hopping up the path.

"I am going to tell them now, Mr. Jim," he called back. "We licked him, mother, we licked him! And I won three hundred and fifty dollars and now I'm going to Cleveland to see Dr. Weber !" he was shouting as he hopped up the path.

"But I don't understand, dear," cried his mother.

"Of course you don't, mother, but Mr. Jim lent me fifty dollars to bet on the fight, and I won three hundred and fifty! I will get it on Monday."

Mr. Clark and Jim came up the path. Jim introduced Professor Clark to Mrs. Moore and Sis. Then he explained to Mrs. Moore that Johnny had the money now, and with her permission Mr. Clark was going to take him to Cleveland with him on Monday, and as Dr. Weber was a friend of the Professor's, it would be much better than going with a stranger. Mrs. Moore thanked Mr. Clark and Jim and asked for a little time to think it over. She invited them to come up on Sunday and take dinner with her. This they agreed to do, and as they were going down the path, they could hear Rusty telling his mother and sister how "we licked him in the fourth round."

In a small room, back of Fox's bar, sat Red Mullin, a picture of disappointment and despair. A quart bottle of whiskey was standing on the table, from which every few minutes he would take a drink. Shorty Milliron was trying to patch him up with court plaster. Red seemed to be still dazed.

"I couldn't hit him, Shorty, I couldn't hit him," he sobbed, "he wouldn't stand still. He's not a substance; he's a shadow. I've lost every dollar I have and eighteen hundred that belongs to the company!"

"He certainly did trim us all!" said Shorty. "I wonder who he is, and we bet our money seven to one against him!"

About two o'clock Sunday morning the ferryman at Monterey was aroused by a loud pounding at his door.

"Who's there, and what do you want?"

"Want you to take me across the river. I want to get the night train to Pittsburgh." It was Red Mullin. He had walked all the way from Petrolia—carpet bag, dinner pail and all. As the ferryman came out and held up his lantern to take a look at him, he was startled at Red's appearance.

"My God! What's the matter! Glycerine explosion, or cyclone?" he exclaimed.

"No, lightning," said Red.

"Anyone else hurt?" asked the man.

"No, I was the only one hurt."

"You look as though someone had used a sledge hammer on your face!"

"That's the way it feels!" said Red, and he smiled grimly as he stepped into the boat; and Petrolia saw him no more.

Sunday afternoon Professor Clark and Jim took dinner with Mrs. Moore. Here it was decided Johnny was to go to Cleveland with Professor Clark. After dinner Mrs. Moore and Johnny took Jim out to see the chickens. While they were gone, Sis asked Mr. Clark about Jim.

"I have known him ever since he was a boy," said Clark. "His father and mother died when he was small. I think he was one of the best operators in the Western Union office, but he didn't care for the inside work, so he came to the oil fields. I understand he has a good position. He is a big-hearted boy, and if he wanted to stick to the fighting game he would be a top-notcher, but he don't want to make it his profession. About the only way to get him into a fight is to abuse someone else who is not able to take his own part. He's always helping someone who's sick or down

and out. I am proud to call him my friend."

On their way back to the hotel Clark said to Jim: "That girl is a thoroughbred, Jim. You are old enough now to settle down. Why don't you? I noticed every time she uppercut you with her eyes, you ducked."

"Yes," laughed Jim, "to avoid punishment."

On Monday morning Jim was up early, went out to the district, and was back about ten o'clock. Smith and Nolan met him at the bank and they settled up. Paddy had won about forty-five hundred dollars; Smith and Jim had about twenty thousand dollars which they divided evenly. Then Jim had won about three thousand on the outside. After they had settled up, Jim asked Mr. Smith if he knew of any good place where he could put the money to advantage.

"Yes," said Smith, "I was just going to make a proposition to you. We are building a new refinery at Titusville. We expect to put forty thousand dollars in the plant. I am taking about half the stock myself, or two hundred shares. Now, I can get you one hundred shares; that will cost you ten or eleven thousand dollars. My other plants are making me from forty to fifty per cent, and I think this will do fully as well."

"O. K.," said Jim; "I will place the money here in the bank and give you a check for that amount, and I want to thank you, Q. G."

"Oh! cut that out!" said Smith. "I think after we get things going right up there, you had better come up and take charge of the new work. We can pay you more money than you are getting here, and you will like the work."

"Thank you, Q. G., we will go into that later."

In the afternoon stage, bound for Parker, was Professor Clark, Mr. Smith and Rusty.

"I will write you in a few days and let you know what Dr. Weber thinks about the operation," said Clark, as the stage pulled out.

In just a week from that date Jim received a message from Clark, saying: "Operation was great success; Johnny will start for home in about ten days."

Jim started at once to tell Mrs. Moore and Sis the good news. He found Mrs. Moore at home.

"Well, Mrs. Moore, good news!" Jim exclaimed joyously as he gave her the message.

"Oh, I wish Sis was here," she cried. "Mr. Cummings, we can never pay you for your kindness."

"Yes you can, by not saying another word about it," said Jim. "Where could I find Miss Moore?"

"She and some of the children are out in Hepler's woods after wild honeysuckles."

"Well, I'll go out there and see if I can find her."

Jim had not gone very far into the woods, when he heard voices. He soon came up to the party. They had been successful, for they had great bunches of the blossoms. They were so busy that they did not see him until he was very close; then Sis turned and saw him. She looked at him steadily for half a minute, the color creeping into her neck and across her face. Suddenly she held out her hand to him. "Mr. Jim." It was the first time she had called him by his first name. Jim wondered why his heart beat so much faster every time she looked at him. When in the ring, facing Big Red, his heart had not increased a beat.

"Won't you help us?" she asked.

"With pleasure," said Jim, "but first I have some good news for

you." He gave her the message to read.

"Good for Johnny!" she exclaimed exultantly. We will soon have him with us again without his crutch!"

Soon they all were busy. Suddenly, with a scream, Sis ran towards Jim, crying:

"A snake! A snake!"

She was so startled that before she realized what she was doing, she had Jim around the neck, holding on for dear life; and the children holding on to her.

Jim soon dispatched the snake, but instead of gathering flowers, he was busily engaged turning over all the big stones, trying to start another snake.

It was a beautiful evening in June, a month after the fight. Jim had just come back from Titusville; Mr. Smith had written asking him to come up and look over the new refinery, and while there, the stockholders elected him superintendent of the new plant, at a much better salary than he was getting in Petrolia. He had notified Mr. Johnson he would leave on the last of the month.

"Well," said Jim to himself, "I suppose I should be happy, but I'm not. Still, I think it's the best thing for me to do. I am getting deeper in love with that girl every day. Oh, rats! What's the use? I will hitch up and take a drive."

Jim had turned over his district to the new man and was all ready to start for Titusville in the morning. He was going to drive the big team, and Nolan, who was going along, would drive Black Prince. Paddy had accepted a position in the new refinery with Cummings.

"Well, Paddy, are you sorry to leave Petrolia?"

"Yes, I always liked the people here, but I want to quit the booze game. I'll never sell another drink of liquor as long as I live. I haven't tasted a drop since the fight, and I never will, so help me, God!" and Paddy raised his right hand.

"Shake," said Jim, "same here; I never did it because I liked it; I'm through with it and the poker game, too. I am going up to Mrs. Moore's now to bid the folks good-bye. I would like to take Rusty along with me, but I don't suppose Mrs. Moore would care to have him go. I've become very much attached to that boy."

"Yes," said Nolan, "and there is another member of the family you are very much attached to, too. Excuse me, Jim, for butting in, but why don't you go in and win?"

Jim's face flushed for an instant, then he smiled and said, "Paddy, when I was a little newsie in Cleveland, I used to walk along Superior street, look in the windows, admire the nice things, and sometimes long for them, but never dreamed of getting them. I'm a man now; there is something nice in a window on Main street in Petrolia; I admire it and long for it, but never dream of getting it."

When Jim arrived at Mrs. Moore's cottage he found Mrs. Moore and Johnny had gone over to the Hepler farm on an errand. But Sis was at home. He explained he had come up to bid them all good-bye. Sis looked very white for a minute, then she said she knew that her mother and Johnny would be sorry to see him go.

"And what about Sis?" said Jim and he was surprised at himself. "Oh, never mind what Sis thinks; she doesn't count," and she turned and left the room.

Jim was puzzled for a moment, then he followed and found her in the kitchen, her head on the table; she was sobbing as if her heart

would break. In a second Jim was down on his knees beside her, saying:

"Oh, Sis, I never thought you cared for me. I have wanted you so much, but I didn't think I was worthy of you. I am only a rough pipe liner and used to drink and play poker, but, Sis, I have been clean in every other way. Why, you never let me know in any way, shape or form that you cared for me. That was one reason I wanted to get away from Petrolia; I was getting in deeper every time I saw you."

Sis was smiling now through her tears. "Say, Jimmy boy, (she had both arms around his neck and her head on his shoulder, looking up into his eyes) who ever called you Lightning Jim had another guess. Do you know what I would call you?"

"No."

"Well, Second Sand Jim."

"Why, Sis, second sand is the slowest thing on God's earth."

"Yes, I know. Oh, you Jimmy boy. You are only a rough pipe liner, are you? Well, I don't want any candy man, nor any sissy man; I want a real man. I am going to have one who can fight for me, if need be; one who can protect me at all times. Why, Jim, you had me groggy when you dropped that window the Englishman had up in the car. And when I came up home that noon and found you were the one who had taken Johnny's part, that was when you delivered a knock-out blow, and I went down for the count." She laughed a happy little laugh.

"You see, Mr. Jim, I have been reading up on the fighting game so I could talk to you intelligently."

Sis was doing all the talking now. Jim was too much amazed at his good luck to think of anything to say.

"Now put your arms around me and kiss me, Jim; those white arms with the muscles playing under the skin, that Johnny talks so much about. Jimmy boy, I am dying to see them. Am I not awful? But I am so happy, Jim, I want to talk all the time. Jim, do you know what Johnny will say when I tell him? No? Well, just 'Bully for you, Sis.' He idolizes you, and doesn't he get along fine? His knee is getting stronger every day; it gets a little tired sometimes, but with that exception it is as good as the other one."

"Do you know, Sis, after I had picked him up in the bar-room and was putting the water on his head, he opened his eyes and looked up at me and my heart went out to him in an instant. I didn't know what it meant at the time, but I understand it all now."

They sat for quite a while in silence. Jim was the first to speak.

"While in Titusville, Mr. Smith asked me to go over with him and look at a new house he was completing. He expects to get into it the first of the month. Everything is very fine about the house. It will cost about fifty thousand when completed and furnished. Then we went around to the one he is moving out of; it is an eight-room brick house, center hall. I like the house very much, but what attracted my attention was the fine, large porches and the grounds around the house. The grounds have a number of fine maple trees, all kinds of shrubbery, and a great many rose bushes; a beautiful home for any one. But what surprised me most, after we had gone over it, Mr. Smith turned to me and said:

"We expect our superintendent to occupy this place."

"But, Q. G." I said, "I am a sin-

gle man, and would not have any use for a house like this."

"Well, we expect you to live in this house, and we will not argue it further."

"Say, Sis, everybody seemed to know what was going to happen to me but myself. Mr. Smith knew, Mr. Clark knew, and even Paddy knew.

"Now, I am going down to the telegraph office and wire Smith I'll take the house. I think it will be about the right size for us; and a room for Mother Moore. Don't you know that sounds funny. I cannot remember my own mother. Then a room for Rusty; good old Rusty. If it hadn't been for him I don't think I should have met you. He is to go to school, now he is going to get his chance."

Well, everything is over; the brick house is lighted from cellar to attic, and it now reads: "Mr. and Mrs. James R. Cummings." Professor Clark, Q. G. Smith and Mr. Nolan are the last to leave. Sis did not want any wedding trip. She said, "I simply want to stay right here in this beautiful home and some time later we can take a trip."

In a small room adjoining his bedroom Jim had had the refinery telegraph wire cut in; and as they went upstairs he heard someone calling him. Jim answered, and it seemed to him every operator with whom he had ever worked was cut in on this wire, for the "73" extended from Cleveland to Pittsburgh.

After they all were in, Jim called to Sis, "Come here a moment." He explained to her they were congratulations from all the boys on the line.

"Now, I want you to place your hand on the key with mine, while we answer them. '73' means a telegrapher's best regards. 'O. T.' means 'off tour,' or the day's work is done, and 'G. N.' means 'good night.'

"Now: '73—O. T.—G. N.'"

And from fifty offices clicked back "G. N."

THE CHILD AND THE MIRROR.

FROM THE FRENCH OF FLORIAN, BY C. C. COCHRANE.

A child who was raised in a poor village, visited some of his relatives in a neighboring town and was much surprised and interested on seeing his first mirror.

At first he loved to look at his image in the glass, then, by some whim well worthy of a child, or even of a grown person, wishing to insult the former loved object, makes a face at it, which the reflection immediately returns, at which his anger became extreme. He shook his fist at it and in return saw himself threatened. Our little boy, trembling with rage, then began to strike the insolent image, with the result that he injured his own hands. His anger was simply increased by this, and furious to the point of despair, here he was before the mirror, howling, crying and striking the glass with his fists.

At this point his mother came on the scene, embraced him, dried his tears and gently said to him: "Did you not begin it by making faces at this wicked child who has caused all your anger ?" "Yes." "Now, look; you smile; he smiles; you hold out your hands to him; he does the same to you. You are no longer angry; neither is he. Here you see the symbol of society."

The good, the evil that we do, is returned to us.

TWO ORPHANS OF TIGHT PINCH.

BY GEORGE AUSTIN BARNES.

THE hill road from Pithole swung sharply to the right, squeezed between two great boulders, and continued on its more gradual descent to the settlement in the valley. Doubtless it was this restricted passage that prompted the first teamsters to christen the dingy oil town "Tight Pinch."

Along the road, through the early morning sunshine, rode curly-headed Johnny Hilliard, professional gambler and social pariah. As his horse ambled gently in a little cloud of dust, Johnny sang a foolish, lilting song about knights and ladies fair, and their brave deeds and tender loves; his pockets were as heavy as his heart was light. The past weeks among the speculators and oil men in Pithole had been golden for him, and ahead lay Titusville, another Eldorado, awaiting a quiet gentleman of skill, such as he.

Above the boulders that had given a name to the town, a spring gushed forth, and a rough trough stood by the roadside. While his horse drank, Johnny looked down at the settlement. It was a bare, dejected place of rough, unpainted houses, mostly of a single story, straggled over the ground, with no pretense to regularity except for its short main street. He wondered if the inhabitants were as unlovely as their surroundings.

Among the low pines and red oak above the spring stood a rough two-room cabin, with a shed at the rear, that had been abandoned by its last tenant and was rapidly falling into decay. A movement on the bank above attracted his attention. A woman came down the path to the spring. She seemed little more than a girl, small, but beautifully formed, and dressed in the finest fabrics, cut in the latest extreme mode. Her bright hair, unconfined by a hat, lay in clinging tendrils across a broad, low forehead. Her features were exquisitely fashioned, and her eyes, wonderfully large and dark, looked at Johnny calmly, as if it were the most natural thing in the world for a woman of such unusual beauty to have so low a dwelling. When she brushed the rebellious hair from her face, he saw that her hands were soft and white and sparkled with rings. He went on his way marveling at the vision.

As he entered the town it seemed almost deserted. No children played in the dusty road, nor women called sociably to each other from open doors. Occasionally frightened faces peered from behind closed windows. At the hotel he waited long for his breakfast, which was cooked and served by the shirt-sleeved landlord.

"What's the matter with this town, anyhow?" Johnny asked. "Somebody must have put a blight on it."

"They have. Smallpox!" the landlord replied fearfully. "All the help skipped out last night, and I'm doing the work myself."

"How many cases are there?" Johnny inquired.

"Only one, thank God! and that's Brady's Annie. He was found dead in his shack behind the livery stable last night. We didn't know what it was; supposed it was the D. Ts., and everybody went down to have a look. Then we found Annie was sick, and somebody called Doc Palmer. It didn't take us long to scatter when he said 'Smallpox'."

A sudden commotion in the street drew the curious landlord to the window.

"Come here, quick !" he cried.

The girl Johnny had seen at the spring came hurrying along the street, passed the group of men in front of the saloon, unmindful of their bold scrutiny and low-voiced familiarities, and turned into the alley by the livery stable. The men looked at each other wonderingly.

"Who is she ?" Johnny asked.

"The Cricket !" the landlord replied animatedly. "Suppose you've heard of her. She was the fanciest girl in Titusville."

Johnny shook his head.

"Pewee Nuttal brought her here. Left his wife and kid for her. Much good it did him, though."

"How so ?" Johnny inquired.

"Well, Pewee was a card sharp, and when he got tired holding hands up there on the hill, he came down and rented a room for a poker joint. We had decided to clean them fellows out after Stonehouse Jack nearly bankrupted the town with his game, but Pewee wouldn't listen to reason. So we raided him, and he shot the constable in the leg. I wasn't with the posse," he interpolated hastily, "but they say they started him back to Titusville and left him. The next morning the stage driver found him lying in the ditch about a mile out, with a bullet hole clean through him."

The Cricket's reappearance cut short further detail. The landlord gasped, and the frightened men surged back through the swinging doors of the saloon, for she carried the child, wrapped in a ragged quilt, in her arms. She was bareheaded and her efforts had disarranged her hair so that it fell in shining disorder about her shoulders and over her gay dress. Cuddling the sick child in her arms, she hurried down the street, her disdainful gaze ignoring the frightened faces at the windows of the ugly houses. She paused to rest several times in her ascent of the hill, and each time she raised the tattered covering and tenderly wiped the fevered little face with her dainty handkerchief.

As the men watched her, the stage came over the crest on the hill through The Pinch. The girl met it midway of its descent, and they saw the driver pull up for a moment and then lash his horses to a furious gallop.

The knot of men ran forward to meet him, and Johnny returned to his breakfast.

When he had finished, he ordered his horse, paid his score, and rode up the hill toward the cabin. At the watering trough he stopped and, while his horse drank, studied the little building curiously. Then he dismounted and climbed the bank.

There was no sign of life about the cabin, but in answer to his knock there was a frightened stir within, and a moment later he was looking into the most beautiful eyes in the world.

"Oh, I thought it was the doctor !" The Cricket gasped.

"Did you send for him ?" asked Johnny when he had recovered his voice.

"Yes, but he hasn't come. Perhaps he's out on another case.

"I'll get him for you," Johnny volunteered.

"Oh, if you only would!" she cried. "Annie is so sick, and I haven't the slightest idea what to do."

He rode rapidly back to the settlement. The doctor was in the saloon, surrounded by a crowd of idle men. Johnny approached and looked him over critically from the top of his head to his feet.

"What's the matter with you?" the doctor demanded, flushing at this affront.

"Nothing is the matter with me," Johnny replied blandly. "You're a doctor, are you not?"

"Yes, I am," the other snapped.

"Why didn't you go up to see Brady's Annie when you were sent for? You're not a coward, too, are you?"

"What business is that of yours?" the doctor blustered. "I'll go where I please. I'm not going to waste my time looking after a drunkard's brat and a—

Johnny's uplifted hand stopped him. "Maybe you weren't this morning, but you are now. I'm going back there, and if you don't show up in half an hour, I'll come down here and kill you. My name is Hilliard—Johnny Hilliard. Maybe you have heard of me." He smiled grimly at the involuntary start that followed the mention of his name.

He walked quietly from the room and rode back to The Cricket. She was plainly relieved to see him again, but interposed herself when he would have entered the house.

"You mustn't come in!" she cried. "You don't understand; it's smallpox!"

"Well, if you're not afraid, why should I be?" he asked calmly. "And besides, I've had it, and know something about it."

Silently she led him into the room where Annie lay staring at them with patient Irish eyes. Johnny brushed the hair from her forehead and laughed down at her.

"This is a nice thing for you to do—to go and get sick just when I was coming to see you."

The child smiled back at him wanly.

"I'll kill that doctor, sure, if he don't come soon," Johnny thought.

It lacked several minutes of the specified half hour when the physician's faltering step was heard on the porch. Johnny met him at the door.

"I see you decided it was better to take a chance with the smallpox than a sure thing with me," he laughed.

The doctor scowled at him, but smiled a moment later when The Cricket appeared.

"You're going to pull the child through, Doc," Johnny said confidently. "So you had better get busy right away. I'll do the right thing by you when she is well; but I'll also do the right thing if you neglect her." He shot a level glance at the frightened practitioner.

It was an hour later when the doctor passed him, sitting by the watering trough.

"How is she?" Johnny inquired.

"She's pretty sick. Don't know that I can do anything for her," the doctor mumbled.

"Well, you keep right on trying," Johnny responded cheerfully. "You come up again this afternoon, and every day until I tell you to stop. And be careful not to miss a day, or I'll come after you—and that would be troublesome for both of us."

The ensuing days passed quickly for The Cricket. There were so many things to do, and Annie required constant attention. Johnny was not talkative, but he spent hours playing solitaire at the deal table, where he could see her sitting

by the bedside in the sick room. He was watchful of her comfort and convenience, however, and she found wood and water at hand when required, and appetizing meals appeared regularly.

The morning of the fourth day, as they sat at breakfast, he noticed the tired droop of her body and the delicate blue shadows beneath her wonderful eyes.

"How did you sleep last night ?" he asked suddenly.

"Not very well. I took a couple of cat-naps when I could—it frightened Annie to wake and find me asleep." She smiled wanly.

When they had finished the meal, he mounted his horse and rode down to the settlement. Inside of an hour, a bed, mattress and bedding were unloaded by the watering trough, and he carried them to the house. When he made up the new bed in the back room, he went to Annie's door.

"I'm going down to the spring for a few minutes. You undress and go to bed out here, and I'll look after Annie today. Now, don't argue. You're tired out and will be sick yourself the first thing you know. I'll give you ten minutes."

When he returned she was in bed, the covers drawn tightly up about her soft chin. With her delicately-colored skin and big eyes, she looked very like a beautiful, innocent little girl. At sight of him, she blushed faintly.

"Now, go to sleep," he commanded. "If I find I can't run things, I will call you."

She slept until late afternoon, and then insisted on resuming her place by Annie.

When Johnny returned that evening from the grove, where he had been gathering fire-wood, he found The Cricket sitting by the window, her lap filled with ribbon and shimmering silk. He slipped to the bedside and looked down into Annie's face, gruesomely disfigured by fever and disease. Then he tip-toed to the window.

"How is she ? Better ?" he whispered.

She shook her head. "I'm afraid not; she seems to be in a stupor." Her lips that formed the words quivered.

Johnny stared down the dusty road toward Tight Pinch, a troubled look on his cheerful face. Fatalist that he was, it seemed so useless, this sacrifice of a child.

"What are you making ?" he asked suddenly.

"I don't know." The Cricket replied. "It was to be a night-dress for Annie; but I don't seem to get it together right." She held up the shapeless garment for his inspection."

"Where did you get the cloth ?" he inquired.

She did not reply, but her face flushed faintly, as it had that morning, when he found her with the covers drawn up to her chin.

"You're cutting up your clothes," he accused.

She smiled at his earnestness. "Yes; but she needs them more than I do. If you could only see the poor child's wisps of clothing; so coarse and with such funny bungling darns and patches."

"But what will you do ?" he demanded. "You didn't need to destroy your clothes. I could have bought cloth at the store."

"Not like this, Johnny. She needs soft things against her tender skin more than I do. And I will never need these again. I hate them and all they stand for !" she said fiercely; and then added honesty, "and yet I love all these pretty, luxurious things, too."

He made no reply. This was a

matter he could not discuss with her. After a moment she repeated, as she resumed her sewing, "I will never need anything of this sort again."

During those days and nights, Hilliard saw a miracle—saw The Cricket emerge from the veneer of her sinful past life into a sweetly solicitous, self-sacrificing woman—saw the latent motherhood in her eyes, in her ringless hands as they brushed the hair from Annie's hot forehead, in her voice as she soothed the child in her delirium. The coquette disappeared, never to return, and left in her place the woman, who had been obscured by years of irresponsible living. She would not allow him to sit with Annie through the long nights, nor to do more than care for their domestic needs; the sick-room was her kingdom; her service was love—an unreasoning, inexplicable love for the tattered waif she had rescued.

Through anxious day and sleepless nights she hovered over the little patient until intelligence returned to the limpid Irish eyes and at last a wistful smile lighted the scarred, childish face. And just when she had beaten Death back, the spectre suddenly transferred his clutch to her.

The days and nights of watching had brought The Cricket and Hilliard very close. The morning that Annie awoke without fever was full of inexpressible relief to them. Johnny whistled gaily as he brought wood and water and cooked their meals, and The Cricket moved about the cabin with a radiant face, humming snatches of gay little songs. But that night, when Johnny tiptoed in to look at the sleeping child, he paused in consternation at sound of stifled sobs from the bed where The Cricket had thrown herself to rest before taking up her vigil.

It was several minutes before she could reply to his agitated inquiries. "She is the dearest child," she sobbed. "I feel as if she were my very own. And she is so grateful. When I tucked her in, she caught my hand and kissed it and said, with that funny Irish brogue, 'I never had anybody to love me before.' I'm glad she has nobody to love her but me. She is the sweetest child in the world."

Johnny patted her hand comfortingly. "There's another pretty good girl around here, too," he said huskily. "And I wish she didn't have anybody else in the world to care for her."

And, leaving her wide-eyed with surprise at his unexpected outburst, he went into the other room and gently closed the door.

It was nearly morning when he was awakened by her call. When he came, carrying the lighted lamp, she looked at him with frightened eyes.

"I'm sick, Johnny," she gasped. "I have been sick for hours, but I didn't want to disturb you; I thought it would pass away. My head is splitting and my back aches so."

Johnny set his lips grimly. "Now, don't get scared," he admonished. "You'll come out of this all right."

"Oh, Johnny, I haven't— Her voice trailed in horror.

"Yes, I'm afraid you have," he replied. "But don't you give up I'll pull you through all right. Let us take this thing quietly, and not wake Annie or scare her. You'll be game for her sake, won't you?"

She nodded her head with a bravery that her frightened eyes belied.

And so Johnny took up the fight alone. And the cruel days dragged endlessly, with never a respite except the few minutes sleep snatched when Annie drowsed or The Cricket

lay in stupor. The doctor came regularly, except one day; and the next morning Johnny met him at the spring, as he staggered up the path, and thrust a pistol against his breast and cursed him calmly and fearfully.

Day by day, helplessly, he saw the terrible inroads of the disease; the disfiguring eruption and inflamation that marred the smooth skin and distorted the features so her beauty turned to repulsiveness and her face to an unrecognizable, gruesome mask of horror, and her voice changed to a husky croak. And with every repellent change, a new feeling grew within him and he labored doggedly to save what suddenly had become dear to him.

Annie had recovered so that she could spend hours in the back room, sitting where the sunlight fell warmly through the window. Johnny carried her out every morning, surrounded her with everything she might need, arranged her chair so she could lie down if she became tired; and then returned to The Cricket.

There were hours when his soul writhed as she wandered in delirium and spread before him the innocent beauty of a young girl's heart—strangely, her mind at these times did not touch upon her recent illegitimate life, but groped back to chilhood. And, listening, Johnny cursed the man and circumstances that had betrayed her.

One morning he awoke from a doze, feeling her eyes upon him. Unshaven, haggard, he started forward in his chair, to meet her weak smile of recognition.

"Annie ?" she whispered.

"She's all right; sound asleep," he replied huskily, and turned his head that she might not see his moist eyes.

Her convalescence was rapid, and by the time Annie could walk to the spring and back, The Cricket was able to sit propped up among the pillows. One afternoon, when she had been following Annie with loving eyes as the child played beneath the trees, she turned suddenly to Johnny and asked, "Have I changed much ?"

He laughed down at her indulgently. "Well, I'm not much of a judge, little girl, but it seems to me you never looked nicer than you do right now."

"No; I want the truth, Johnny," she said earnestly. "Am I much changed ? Is my face badly marked ?"

"Yes, a little," he replied, soberly.

"Please bring a mirror," she said; and when he would have objected, she added, "I might as well know the truth now as any time, and it really won't make much difference whether I have any looks left or not. You will find a glass in the tray of my trunk."

He brought it to her silently. She held it in her hands for a few minutes, while she stared out the window, up the dusty road along which she had flaunted her exquisite beauty. Then she raised the mirror and shifted her gaze to it.

The next instant the glass fell in her lap and she uttered a little cry of distress. Johnny's arm was around her shoulder instantly, and he tenderly drew her to him.

"Don't you cry, little girl. You are still beautiful; there is no other woman in the world your equal. And when you get the color back to your cheeks, you will be as pretty as ever. And what do we care, anyhow, Annie and I !"

She made no reply, only clung to him and cried softly—and knew that he could never understand her grief.

There was no other reference

made to her changed appearance. The mirror disappeared, and only by her caresses of Annie's scarred little face did Johnny sense the loss she had suffered.

As the days of her convalescence passed, an atmosphere of constraint grew between them, and Johnny spent more time by himself in the woods or with Annie. At last came the day Johnny had dreaded. The summer heat had spent itself, and the country lay swathed in the gentle warmth of September. Below them, as they sat by the spring, Tight Pinch lay in soft haze.

"Johnny, I am well," The Cricket said suddenly, breaking a rather conscious silence.

"You are getting well," he corrected, almost challengingly.

"No; I am well," she repeated. "Well enough to travel. And I am going to take Annie up into the mountains for a few weeks, until she is quite strong, before I decide where we will settle. It must be some place where I can find work to support us."

"Don't let us talk about that," he said, turning to her impulsively. "You don't need to work. Come with me. Let me take care of you."

She went suddenly white, and her accusing eyes were full of tears as she said, with ineffable sadness, "I didn't expect this from you. I thought I had made it plain that my old life was laid aside forever. I have been a bad woman, Johnny, because I was started wrong and never had anything good to cling to. And now that I have found myself and have Annie—" She covered her face with her hands.

"Mary, my dearest girl, I don't mean that!" he cried. "How could you imagine such a thing? I love you. I want you to marry me."

Her hands came down, and she turned to him, her eyes filled with joyous unbelief. Then the light died out, and she shook her head sadly.

"No, Johnny, that won't do at all," she said.

"Why not? Can't you love me? Couldn't you learn?" he asked eagerly.

Again she shook her head. "I do love you, Johnny—love you as dearly as you could wish. But it would not do. I'm not a woman, dear; I'm only the husk of one. You think now that you want me; but I have nothing to offer you. Sometimes a man can forgive a woman because she is beautiful. But I haven't even that to offer you now. And I'm afraid, when the newness of our relations wore away, and you found I was only a foolish woman, after all, you would begin to think of what I had been, and it would rise and stand between us."

She smiled gently at his quick disclaimer. "I know you mean it, Johnny, and that you do care. But women are women, and men are men, and their viewpoints differ. Some day you would realize you had made a mistake; that while you loved me, my past stood between us, and then—that would be the end."

"Mary, you are wrong; I would always love you! And what you have been would make no difference to me; my own past would not bear inspection."

"Ah, if only I could believe it!" she cried. "But you see, I know men better than you do, my dear. And I love you too well to allow you to wreck your life—and mine, too, for I would die if you ever held my past before me. You must let me go my own way. Annie needs me, and I can perhaps expiate my past by being a mother to her and shielding her from the harm that befell me. We are two orphans, she and I, and we need each other—and I need you, too, Johnny; but you don't

need me. We must go it alone."

So it was finally decided. Hilliard burned their clothing—all the beautiful gowns, the soft fabrics, that had seemed so much a part of The Cricket's self in her old life—and fumigated the cabin. And one morning he helped them into the lumbering stage as it stopped at the watering trough, and stood and watched them until Mary's handkerchief and Annie's hand fluttered for the last time at the top of the western hill, across the valley.

He sat for a long time beside the road, his head in his hands. Finally he roused himself resolutely and walked to the cabin. He passed through the two rooms and stood for a time looking about the deserted chamber where he had conquered Death. Then he gathered a bundle of paper and carried it to the rear of the building. In a moment a wisp of smoke curled round the corner of the cabin, followed by a stealthy tongue of flame. It seemed a sudden stillness descended upon the little grove.

Johnny watched the smoke swell to a cloud, and the flames leap boldly to the eaves—until the roof fell with a crash—until nothing remained but a smouldering ruin. Then he led his horse from the shed.

At the road he paused irresolutely. After a moment he drew a pack of cards from his pocket and then shuffled and dealt, first to the east and then to the west. "The first ace decides," he muttered. An instant later an ace fluttered toward the west. He gathered the cards together and mounted his horse. To the west lay Titusville, an Eldorado awaiting the advent of a gentleman of skill, such as he.

He did not look back towards the ruins of the cabin. Fatalist that he was, he felt certain that in some way, at some time, The Cricket would reconsider and send for him. In the meantime he must go his own way and she work out her own future.

For a week the Goddess of Chance made sport of Johnny Hilliard. She took unfair advantage of his attention wandering from the number of cards drawn by his opponents to the recollection of a pair of velvety eyes in a pinched, scarred face He began to take long, contemplative walks in the hours when he should have been sleeping. There must be some way out of the dilemma; some way in which he could overcome The Cricket's absurd belief in her own unworthiness. If only he could persuade her that he, too, was unworthy; that his past or present was more inexcusable than hers. Then one day the solution suddenly came.

Two days later a wretched figure stumbled up the patch to the little hotel in the mountains where The Cricket and Annie sat together. The Cricket saw him first, and her face went white and then rosy red. Startled by her exclamation, the child looked up, and with a cry of welcome rushed to him.

When the first greetings were over, Johnny turned to The Cricket tensely. "Where can I see you alone? There is not a moment to spare."

She dismissed Annie and led the way silently along the path until the woods opened into a little glade. Then she turned to him with outstretched hands. "Oh, why did you come?" she cried. "It has been so lonely, and I was just getting control of myself."

"I had to come, Mary. It is to say good-bye. You told me you were unworthy of me; that your past would come between us. But your sins were only against yourself. Compared with me, you are snow-white."

He waived aside her disclaimer.

"I am a murderer, Mary. I have killed a man in a quarrel over cards. I can't stay in the States. I must get to the border and across into Mexico, where I will be safe. I have no right to ask you to go with me. We could never come back. At first I thought maybe you might—"

She stopped his words with her lips. "Of course I will go. I can pack everything Annie and I have and we can meet you in an hour from now."

THE WRECK

. . . OR . . .

The Marriage of the Renegade and the Rebel Fair.

BY SHAMUS O'TOOLE.

AMONG the flotsam and jetsam, such as oil tanks, walking beams and derricks, which came floating down the Clarion river during that particular period of high water which is still referred to as "The Flood," was the uncollapsible and unsinkable rumor that Miss Katie Kraut, heiress and buxom belle of Elk City, was the recipient of the ardent and apparently welcome attentions of Mr. Isaac Blume, nephew of Mr. Solomon Leefi, the rich junkman of the said petroleum center.

That rumor did not redound to the credit of Miss Kraut; nor did it increase the popularity of Mr. Blume, which was just then strongly on the wane. Luck had been against him from the very beginning of the said memorable year. On New Year's Day, for instance, he was superseded in the expectation of a fine inheritance by the sudden and accidental adoption of a foundling on the part of his uncle Leefi, as was duly and sadly set forth in the public records at the county seat, and detailed in the January number of this Magazine. What few friends were left to Mr. Blume after the publication of the legal supersedeas were now lost to him, forsooth he was enamored of the fair and plump Katie, as he had the privilege to be.

But, after all, what are friends in comparison to the delights of success in love ? Friends are often but fine weather company; a sweetheart is an eternal pal.

The idle, the scandalous gossipers, the meddlers and the marplots of the Clarion region were somehow deeply interested in this new social development. This was rather strange, for, as a rule, the oil man is too busy with material things to adventure upon the pleasing and oftentimes dangerous pastime of acting as "the perpetual dragoman to the eternal femin-

ine;" he is essentially a pursuivant of the golden fleece rather than a devotee of the fair. The annals of the good B. S. land of fickle fortune, frenzied finance, fire, flood and other fatalities is, therefore, signally free of infatuated death, woeful suicides and other bleedings due to adoration. There are many gallant gentlemen, of course, within the kingdom, but, as said before, they are too busily engaged in endeavoring to avoid bringing in "dry holes" to have time for any other exquisite indulgences. Their garb in the field is the overall; evening clothes are packed away elsewhere usually.

The fact, therefore, that the private matters of Miss Kraut and Mr Blume were discussed in the time of flood and general destruction clearly indicated that there was something out of the ordinary. something of very general surprise in the affair. Such was really the case. Renunciation and sacrifice were connected with it. The bride and the groom-to-be were, moreover, the antithesis of each other in weight, religion and social relationships, as well as in weight and stature. For the buxom Katie, Mr. Blume became a renegade; for Mr. Blume, the fair Katie evolved into a rebel.

In the vulgate of the day the case was usually alluded to—and passed down the line—somewhat in this fashion: "It is said up in Elk that the little Jew, Ike Blume, is actually going to marry the Dutch girl. Katie Kraut. Hasn't that chap the gall to get ahead of decent, uncircumcised Christians in this way ?"

Such comments were true indications that the prospective alliance was not a popular one. The twain directly concerned gave little heed, however, to what people said or what they thought. If race, religion and all the conventions of life forbade the bans, they were quite indifferent to the fact and unconcerned as to what the consequences might be; they felt, and felt rightly, that mutual affection fully and fairly sanctioned their union. The neighbors were free to criticise, comment and condemn all they pleased. They were both of lawful age, free born, and amply able to take care of themselves.

"Give us liberty, or give us death," they both chorused when the impertinent voices sounded about them.

So it came about that, the Flood having subsided and the season of burning heat being arrived, they were duly and legally married. The ceremony was performed by the hyphenated minister, an imperial-looking man who, with reluctant "goose step," marched mournfully into the Kraut parlor on the appointed day and, before a melancholy gathering, read the fatal ritual which joined together Miss Katie Kraut and Mr. Isaac Blume —the rebel and the renegade—forever and forever. Amen !

The fact that the groom had embraced Christianity did not seem to enthuse the clergyman, nor any others of the numerous guests. There was no rejoicing of psalm-singing over this conversion. It was not always so, for does not the scripture tell of the hosannahs which followed the raids of the holy saints, Peter and Paul, upon the synagogues in the olden days! The pledging under the wedding bell, with a fine spray of mistletoe hanging from it, was more like a double execution or perhaps a mutual suicide than anything else.

The Krauts were in tears: the loveliest of their house had turned her back upon them; had cheapened and unclassed herself. She

kitchen by the thoughtful maid. During the ceremony their entire attention was somehow or other centered on the wedding bell and, particularly, the spray of mistletoe hanging therefrom. When the mournful ritual was finished and the minister kissed the blushing bride in a sacrificial way, the boy shouted: "Me ! Me next ! Kiss me, Katie, kiss me ! I loves you very much. You are so pretty and so good !"

No one being apparently eager or anxious to obtain the favor, Katie Blume lifted the child high in the air and carressed him fondly and often, as if in proxy for all present. During this sweet reiteration, the dog stretched himself at Ike's feet and fondly rubbed his massive snoot against the groom's polished shoes. It was all very fine—this ending of the tragic ceremony—the appeal of the boy and the act of the dog.

But what followed was more original and spectacular by far. When the boy was finally placed upon the floor, he looked around for a moment as if dazed, and then he shouted: "Will nobody kiss Cousin Ike Blume ? Does no one love him ?"

Not a soul stirred. Mr. Blume felt his unpopularity acutely at that painful moment; all the world avoided him; he was like the man who, in the days of general health, wears about his neck a little bag of asafoedita to ward away the epidemic and the plague. Yet of what crime had he been guilty ? Surely the indulgence in matrimony was not an indictable offense. The general wretchedness was intensified by an unintentional outburst of Aunt Rachael Rebecca Leefi, who, expressing her thought in words, and wholly unaware of the utterance, cried aloud: "No one loves Nephew Ike Blume now ! He is disowned—disgraced; he is a renegade—a wreck, a wreck !"

With flashing eyes Katie turned upon the gathering and surveyed them scornfully, one by one. This optical annihilation being finished, she reached her arm towards the wedding bell and plucking thence the spray of mistletoe, calmly, defiantly and carefully pinned it to the tail of her husband's wedding coat, and then, triumphantly and proudly, marched out of her father's house with her prize, softly humming to herself a verse of her favorite song, which ran somewhat in this fashion :

"Oh, were my love a sailor bold,
Who tarries far from town;
Or were he but a soldier gay,
Who seeks in war, renown.
In weal or woe I'll follow him
Wherever he may be.
I'll pin his colors to my breast
And keep him company."

It was a Germanic triumph worthy of the pretty belle of Elk.

The honeymoon was a seashore indulgence. They found a jolly resort nestling underneath a bold promontory against which the wild waves spent their fury and were tamed for the benefit of the thousand bathers within a circling bay. There was a fine hotel at this particular resort, and they were lucky enough to find a bridal chamber unengaged, which is rarely the case at a popular seashore resort, as so many alleged married couples have discovered.

They arrived at their destination about noontime and, to their surprise, found two bands of music drawn up on the railroad station platform to welcome them with gay music. Ike Blume whispered to

Katie that, doubtless, the boys back home at Elk had prearranged all this, sparing no expense in true oil country fashion, to make amends for the shabby treatment shown them at the wedding. He, therefore, took the liberty of thanking the leader, a massive, uniformed chap, for the excellency of the welcome and begged to inquire who the particular oil men were to whom he and his bride were indebted for the very delightful appreciation.

The band leader looked at the little groom in a surprised manner and exclaimed: "Bride and groom. eh! Well, I hope you will have a delightful time. This, however, is no love celebration. It is the annual chowder party of McManus, the popular politician."

Taking a cab they drove along the sands and, by and by, indulged in a generous "shore dinner," consisting of clams, lobsters, corn on the cob, watermelon and other light delicacies. After the dinner they strolled along the beach. The bride was somewhat shocked at the freedom and frollicking spirit manifested by the half-dressed and attractive mermaids, sporting in the surf. To her surprise and indignation several of these maidens, who were true ladies when properly arrayed, had the audacity to make eyes at her husband; and one or two were even brazen enough to intimate that they were thirsty. This license drove them from the sands to the furthest point of the promontory, where they were confronted by a genuine wreck—a dilapidated, weather-beaten and barnacled-covered ship, that was slowly breaking to pieces. A battered sign was hanging to the bow of the one-time ship, and painted thereon was the rude picture of an angler, unfastening a fish from the hook; underneath the angler was this announcement: "Fine fishing here, if you have the price." Another line conveyed this occult information: "I never smelt a smelt which smelt like that smelt smelt."

"See, Katie," said Ike, "it is just the same at the seashore as it is in the oil country. You have to have the price before you can smell the fish."

"But you have to catch him first," she responded.

When evening came on they dined in table d'hote and then went out for the true indulgence of the seashore, to-wit: the evening ramble. Finding a bench, they seated themselves thereon to enjoy the breeze and the rippling of the waves.

The cooling winds refreshed them marvelously, and they were very happy and very content to find themselves alone at last. Soon the merry, smiling moon came up out of the east to greet them, laying down a broad white pathway upon the restless silvered deep as if to invite the renegade and the foreign woman to venture beyond the horizon and repose themselves in the chaste cavern of the Mount of Love.

Their solitude was suddenly interrupted by a man who, to their surprise, seemed to drop from the overhanging clouds. This individual, not waiting for an invitation, sat down by the side of Mr. Blume and, very much to his annoyance, began to groan—groan loudly and continuously, in a deep bass voice.

"Friend, inquired Ike, after some moments of painful endurance, "what's the matter?"

"Oh, oh!" continued the groaning one, "oh, oh, oh! Take pity, stranger, on a wreck—a wreck! But yesterday I was like the proud ship sailing defiantly upon the deep. Tonight—oh, oh! tonight, I am a wreck—a wreck. I signed the

deeds to all my property at noon this cursed day; I gave all to my wife, my charming, my beloved wife; even my bank book did I give her, and the key of my safe, this very noon; at 3 o'clock my little Lina, my beautiful one, the cruel and heartless creature went off with a handsomer man. Oh, oh! it is a fearful thing to be a wreck! Look at me, stranger, and beware of my fate! I was a soldier boy and won in war renown; now I am but a wreck, a wreck!"

Saying which, he fled away.

"What a brazen hussy she was," said Kate, "to run away from a soldier boy! Shame on her!"

As they returned to their hotel they were stopped by an ancient mariner who inquired of them if they had seen his wife. His story was like that of the soldier, with more pathetic details. He had sold his ship and she had run away with the chief mate. It seemed as if women were fickle everywhere, and that the sailor bold and the soldier gay had no assurance of happiness, Katie's favorite song to the contrary.

"Katie," said Mr. Blume, "I am very tired of wrecks. I wish it would rain for a whole week so that we could neither see nor hear about wrecks. The trouble with the soldier and the sailor was that they were not business men. Hold on to your coin and you have your wife."

When the following morning came on, Mr. Blume arose in great good spirits and surveyed the elegance of the bridal chamber. It was a room having four heavily curtained windows. Drawing aside the draperies of the first, he looked out, and there before him was the wreck, underneath the promontory; it was so at the second, at the third and at the fourth window—where ever he looked his eye rested upon the cursed wreck. There seemed to be no escape from it.

But, thank heaven, it was raining—raining hard; this meant that they would remain indoors and would not be accosted by the human derelicts at least.

How very delightful it was to be alone—all, all alone—with his Katie. He uttered thanks that the rain was of deluge-like proportions. How much greater would he be envied than even King Solomon of most excellent memory—for, while Solomon had a wife for every minute, he, Ike Blume of Elk City, the renegade, had every minute for his wife—the plump, the pretty, the agreeable Katie Kraut that was!

But the rain continued all that day and all the next, and all the next thereafter.

Finally the sun came out, the bathers reappeared, the boardwalks were thronged and hilarity ruled everywhere.

Mr. Blume went out alone to enjoy a rest. He flung himself upon the sand, and the breeze fanned his brow. While reposing thus, an exceedingly handsome lady approached him and, with the true freedom of the shore, engaged him in conversation.

"You are," she said in familiar tones, "the bridegroom. You are rejoicing in your strength, as all bridegrooms do! You are like that great ship yonder which proudly sails across the bounding waves. Lucky man, lucky man!"

"I am the groom alright," responded Mr. Blume, "but, lady, I'll make a confession to you; I am not the proud ship; I am the wreck!"

"The wreck?" she inquired. "Why the wreck so soon?"

"Because," replied Ike Blume wearily, "it rained three days steadily."

Evil to him who evil thinks.

Healdton Oil Pool, Oklahoma.

Leads in the Production of Petroleum--Sixty Strings of Tools Running, Within Defined Territory--Ragtown the Sodom of Carter County--Thugs, Crooks and Gamblers a Menace to the Workingmen--Murder and Arson an Almost Daily Occurrence--A Paradise For Bootleggers.

BY J. L. HUNTER.

ON December 1, 1915, the Healdton field stood first in production in the state of Oklahoma. The field lies eight miles north of Ringling and twenty-five miles west of Ardmore, the production at the present time confined to Carter county, just across the line from Jefferson county. The story of the final test well that opened up the field is as follows:

Prior to the drilling of the discovery well Rev. J. M. Crichlow, of Titusville, Pa., in company with others, spent many thousands of dollars wildcatting west of Ardmore, and were about ready to write the word "finis," when Apple & Franklin, who had a large acreage under lease west of Mr. Critchlow's tests, went to the latter and offered a certain acreage if he would put down a well.

Having faith that a body of oil lay somewhere in that section of Carter county, Apple & Franklin's offer was accepted, a stake was driven in the earth, marking the location, and the contract let for the building of a rig. Teamsters were hired to haul the lumber, who were informed to unload on the prairie at a point designated by the said stake.

Now, here is where luck, that is oftimes wedded to persistency, came on the scene. Some months before, the right of way for a railroad through this section of Carter county was secured, surveyed and properly staked. It fell out that

McMan Oil Co.'s 2800-barrel Well No. 4 Burning at Night, Healdton Field

the teamsters mistook one of the survey stakes for the one set by the oil company, and unloaded the lumber. They were followed by rig builders, then came the machinery, and when the company arrived on the scene, all was ready for starting the drill. There was some dissatisfaction, but, as one said, "It's only a venture anyway," the crew was told to go ahead.

Contrary to expectations, the well made a splendid showing for oil. Later a well was drilled where the company made the location for a test, which proved to be dry.

It is a question if the Healdton chapter in Oklahoma oil history would have yet been written if the mistake in locations has not been made, so the story runs.

The Healdton pool, as defined, covers an area of three miles in width and six miles in length, the trend being northwest by southwest. The production December 1 was approximately 120,000 barrels, with sixty strings of tools running in the field and ninety-eight companies interested in production.

It will be remembered that during the early development there were no pipe lines to take care of the oil, and huge earthen reservoirs were constructed to take care of the production. Hundreds of thousands of barrels were pumped into these sumps, but, unlike many other sections of the state where the operators were compelled to resort to the same means of taking care of surplus oil, the earth was of a more porous nature and thousands of barrels found their way through the loose earth. This, together with the overflowing of the tanks during flood stages, caused an enormous loss to operators. This was not generally known until there came the erection of steel tankage and pumps were set to work conveying the oil from the sumps to the former. Then came the discovery of the staggering loss to all concerned.

To illustrate: From one tank in which had been stored 350,000 barrels, but 50,000 barrels were saved. It has been carefully estimated that the loss to operators in the Healdton field, up to the time of the passing of the conservation act, restricting production to that of demand, or what could be properly cared for, totaled 600,000 barrels.

It was largely due to the deplorable state of affairs in the Healdton field that led to the passing of the conservation act, and though held in ridicule by some, it proved a boon to the operators, as a number informed the writer while on a trip through the field.

Mrs. Thomas Jackson, Corsicana Lease

One phase of the law to which many operators objected to was the curtailing of production. The fact of the matter was that it was the only safeguard the state had, as, when oil was brought to the surface it passed out of its jurisdiction. This law has been given a thorough test in the Healdton field and, from what could be learned, it is grow-

ing in favor. Then the pro-rating of oil sold gives the small producer a chance with his more wealthy competitor. At present writing 50 per cent of all oil produced in the field is being marketed, and by the first of the year, the officials in charge of the Healdton branch say, 75 percent will be taken by the pipe lines.

It is strange, yet true, that with the striking of new pools of oil, producers vie with each other in bringing the fluid to the surface regardless of any preparedness for its care, but with the producers taking more kindly to methods the corporation commission provides, former waste of oil will be entirely eliminated.


Residence and Power House on the Gunsburg & Farman Tract, Healdton, Okla.

RAGTOWN.

Situated in the heart of the field is a conglomeration of habitations that would not be any harm to worship. The buildings are scattered over a section of land, with two solid rows of houses, each row facing a forty-foot street. At the postoffice department in Washington it is down on the books as Wirt, but in southern Oklahoma it is named Ragtown, so called from the hundreds of tents that decked the woods and prairie during the excitement following the striking of the discovery well.

The population of Ragtown is in the neighborhood of fifteen hundred, and for thugs, crooks and holdup men, it has the once-famous Pithole, of Pennsylvania fame, beaten to a frazzle.

The writer of this article spent several days in the field, making this Sodom of Carter county headquarters, and while there three murders and several robberies occurred. There is one class of evildoers who remind an easterner of that venomous yet cowardly reptile that inhabits the hills along the Allegheny river, the copperhead, as

It must not be assumed that all the inhabitants of Ragtown are riding the fast freight that leads to that somewhere, a place we are told they don't need snow shovels, as the great majority are of that respectability and law-abiding as the framers of our constitution.

Most every state east of the Mississippi river is represented in the Healdton field, with Pennsylvania, Ohio and West Virginia leading. Many have roughed it these many years and have become so wedded to the life that to change vocations would be like hunting for a third wife.

In my trip over the field I entered the office of the Gunsburg & Forman Oil Company, to find reclining on an old "derrick chair" A. G. Gilger. When a small lad, Art made snowballs at Emlenton, and learned to spell at Coal Hill school house, to set sail on petroleum's sea when sixteen years of age, and to moor his canoe at Warren, Ind. Later he moved on to Kansas, then to California. Returning to Oklahoma, he accepted the position as superintendent for the above company. Art informed the writer that he had held every position in the producing end of the business but bootlegging. Not being a chemist, he sidetracked the art. Gilger had just finished an episode in which he played a part back in Pennsylvania, when who should enter the office but E. R. Porterfield, of Emlenton, a school chum of his boyhood days, and althought it would take a rapid-fire stenographer to detail their stories, I managed to derail Porterfield long enough to learn that he held the distinction of working on the first well drilled in Oklahoma for oil, the location made by the Cudhay Oil Company, near Bartlesville. He also toolied on the well that opened up the famous Glenpool that for a time surprised the world.

J. E. Brooks, office man for the Gunsburg people, with years of experience, has charge of the clerical force.

Adjoining the Gunsburg & Forman lease, Westheimer & Daube, of Ardmore, have a number of producing wells that are looked after by J. O. Banks, formerly of Butler county, Pa. The boys of '76 will remember of the big gasser struck on the Banks farm, the first of any note struck in Butler county, now owned by Mr. Coffin, of Bradford, and which is still producing gas. J. O. Banks entered the oil game when sixteen years of age, his first work being that of dressing tools for Joe Emery, who was operating in the Westmoreland county gas belt. He worked in all the principal fields, both east and west, holding many responsible positions and is booked among the graduates of the business.

Strolling along through a stretch of second growth timber, I noticed a neat-looking habitation large enough for two people, where I found F. W. Corts, of McKean county, Pa., who, since the second Healdton boom, has been making holes in the ground for the Corsicana Oil Company, with a "Battle ax," formerly known as the Star machine. Mr. Corts, who has been letting out screw for many years in the Ohio, Indiana, Illinois and Oklahoma fields, has never drilled a dry hole, and attributes his good luck to the ever-ready "Battleax," as he terms the Star.

One of the old guards met in the field was W. B. Smith, of Venango county, Pa. Uncle Billy, as the boys call him, is out of his element when not making a hole, as he terms it. The hundred and one questions about the boys back east

being answered, he informed the writer that he tested the formation from the hills of Bradford to the far southwest and was good for many more years yet, though grown gray in the service.

J. E. Sowers was christened at Lima, Ohio, and when of marriageable age, he allied himself with a pipe line gang in his native haunts, to later find his way into the Healdton province to string pipe for the Katy and Russell Oil Company.

P. M. Varner, birthplace Parkers Landing, Pa., is at the present time drilling for the Twin-State Oil Company.

C. W. Kennedy, of Wesley, Pa., holds a remunerative position with the McMan Oil Company. Mr. Kennedy is well known in the Pennsylvania fields.

P. M. Butcher, Weston, W. Va., took his first degree at pipe lining at Copely in the year 1900. He feathered out to be a bird in the business, to follow the long lines of iron tubes into the southwest, where he secured the position as line inspector for the Magnolia Company, who are laying a line from Healdton to Adington.

J. L. Thompson, born in Butler county, Pa., and a graduate of West Sunbury Academy, entered the game of chance at Sistersville, W. Va., that of contracting, to set his face westward, drilling a number of wells in Indiana and Kansas, when he migrated to Mexico, leaving there, as he said, "to save my

Fire Squad in Drumright, Olka.

A full-fledged pipe liner is Paddy Hill, who has identified himself with the Magnolia Oil & Gas Company. Paddy is a pure-bred Texan Long Horn, and for the past fifteen years has officiated as foreman in the laying of lined in Ohio, Indiana, Texas and Oklahoma.

A. E. Cook, a Californian, with a Texas schooling in the oil business, is one of the Corsicana Company's pumpers.

G. L. Thatcher, of sunny Tennessee, is on the Kelly & Russell pumpers' payroll.

back hair." Mr. Thompson, at the present time, is superintendent for the Gates & Ardworth Oil Company.

S. E. Anderson has spent two decades in the oil fields, three years of that period in Rumania for the Standard Oil Company.

J. F. Matthews, of St. Louis, has done several years of time in the South Texas fields. He is now with the Glenwood Company.

E. E. Ewing, of Sistersville, W. Va., has chalked down twenty-two years in the service, and is now rated among one of the regulars in making holes in the Healdton field.

J. G. Shaw, of Oil City, Pa., with years of schooling, is rated among the fittest in hunting the pay. We found J. G. bailing mud for Kelly & Russell.

E. W. Shaw, Bradford, Pa., with an academic course in Pennsylvania oil fields, is located at Healdton, and when seen was spudding red mud with a 1700-pound bit.

J. R. McCoy, of Clarion county, Pa., with thirty years of field work to his credit, is connected with the Lawrence Gas Co..

Paul Cliston, of Ashland, Ky., is a Healdton field worker who drilled in the first well that opened up the Nowata field, Oklahoma. The Tulsa casing gang in the field are C. L. Lindsey, Joe Jones, Dimp Kennedy, Sam Nation, Grandpa Malory, E. Knapp, Homer Jorey, Frank Dennis, Charles Williams and Oscar Hussey.

W. J. Kennedy, hailing from Bradford, Pa., is listed among the drillers in the field.

J. G. Forker, tool dresser by occupation, is seen on the streets of Ragtown of an evening.

P. H. Lively, of Texas, who served as a rough-neck for a season, served four years in Mexico and Cuba for the Standard Oil Company, is one of the busy contractors in the field, keeping three strings of tools running warm.

E. J. Capman, of Long Island, is associated with the Roxana Company in the land department.

R. E. Verdery, Texas born, is filling the position as assistant to J. L. Walker in the Conservation office at Healdton.

E. N. Dorsey, Findley, Ohio, with fifteen years experience in rig building, is one of the prominent contractors in the field.

J. Q. Wilkinson, of the Long Horn breed, is holding down the position of pumper for the Dundee Petroleum Company.

Perry Franklin is assistant superintendent for the Dundee Crystal Oil Company. His former hangout was Peoria, Ill.

H. J. Kerps, who played marbles at Marietta, Ohio, is helping the Corsicanna Company along with their development work. Kerps has run the entire gamut, having worked in every field down on the oil map, and in some that are not.

P. A. Schreckengast, Pittsburgh, Pa., hit the trail in the year 1884, his early training grounds being the West Virginia hills. It was while at Mannington he met Jim Cunningham, widely known as "Stop Cock" Jim, whose eventful life story is now running through the columns of this magazine. Jim and he became fast friends during their sojourn in Mannington, where Mr. Schreckengast held the position of superintendent of the South Penn Oil Co.'s shops.

C. D. Reed, superintendent for the Coline Oil Company, hails from Meadville, Pa., and from an underwriter in the oil business he holds the above position. With twenty-six years in the business, his stories of the fields, the boarding house, etc.—every oil boy knows what etc.

ing the rails beaten six to seven.

W. L. Stephens is not only a heavy-weight, but the big man of the McMan station, being chief engineer. Stephens is a product of Green county, Pa., and has spent a number of years in the California and Mexican oil fields.

Pete Adsic, superintendent for the Twin State Oil Company, claims Bradford as his birth-place. Pete carries himself like a mountaineer, too.

G. A. Biggs, formerly of Tennessee, took a course in the oil business in Texas, and is now a Healdton graduate, being with the Healdton Oil and Gas Company.

The Ever Ready Casing Company is an aggregation of good fellows, with W. A. Wheeler commander-in-chief, the company being composed of W. D. Page, E. D. Parker, S. C. Jones, T. M. Hopkins, C. B. England, J. W. Kelly, E. Kimes, L. C. Bingham and J. L. Savage.

G. C. Jamison, Morgantown, W. Va., began his oil career by carrying water to the pipe line gang in Pennsylvania. He now looks after the pipe connecting gang for the Magnolia Company.

J. F. Lawrence, Emlenton, Pa., is field superintendent for the Ardmore Gas Company. Both Mr. Lawrence and his wife were Venango county school teachers before taking up his present work.

H. B. Lamb, hailing from Clarion county, worked in the Thrall field, Texas, where he wallowed through black mud until he had learned the "goose step," when he moved on to Healdton, to become superintendent of the producing end of the Corsicana Oil Company.

L. G. Bailey, with the Corsicana people; Otta B. Bradford, field manager for the Producers Oil Company; George A. Todd, general manager of the refinery; H. B. Shupp, construction foreman, for the Producers pump station; W. J. Dean, of Buffalo, holding down a cane-bottom chair in a pump house on the Jennings farm; H. H. Taylor, with the Magnolia Company; Jos. P. Peeler, with the McMan Co.; H. E. Sisler, foreman of pipe line gang, Corsicana Co.; S. A. Sisk, with the Corsicana Co.; W. E. Royer, of Ten Mile Bottom, Pa.; Glen Williams, J. W. McLaughlin, of St. Joe, Butler county, Pa., with the Hapgood Oil Company; Steve W. Hale, of Wellsville, N. Y., with the Roxana Oil Company.

A petroleum wanderer met, and one of the busy merchants of Ragtown, was John A. Kelly, better known from coast to coast as "Honest John" Kelly, who picked hazel nuts on the river hills at Parkers Landing, Pa., many years ago. Kelly is as well known throughout the Pennsylvania and California oil fields as Grandpa's soap, and has hung his "ready-to-wear" overalls sign in almost every oil strike in the States. His partner on his long travels is Nellie, who is a thoroughbred English pointer, with a disposition to let you alone if you behave.

Officiating as superintendent for the Oklahoma Company we found J. G. Hammer, whose home is in Indiana.

J. M. Miller, of Texas, can be seen any day pumping for the Twin State people.

Tom Russell, giving McKean county as his home, with twenty years of oil experience, is drilling for the Twin State Company. W. M. McCullough is with the same company.

R. W. Hudson is superintendent for the Gilmer Oil Company.

R. D. Warren is a rig contractor.

L. Wood, of the sucker rod state, drifted into the Healdton field, met

an Oklahoma lady that suited his fancy, married and settled down to earn a living with the Gilmer people. J. S. Warfield, of Duke Center, Pa., is also a Gilmer fixture. W. E. Dalton, is pumper for the same company.

Venango county readers of this article will be pleased to learn that Vern Calvert, Bullion, Pa., is field gauger for the conservation officials in the Healdton pool, which position, though not a desirable one with its first enforcement, he has filled with credit to both the operators and the state. We doubt if there is a more popular official connected with the corporation commission, his fairness to all concerned insuring proper respect.

A. L. Walker, conservation officer of the commission, with headquarters in Oklahoma City, is a frequent visitor in the field and as operators have found him ready to meet them half way in disputes, he has made many warm friends among the producers. In the days when the curtailing of production led to the printing of a number of fiery articles in the leading oil papers, Mr. Walker never exceeded his authority, but stood firm in that which the act demanded and won friends from the opposing ranks.

Employes of the Prairie Oil & Gas Co., Cushing, Okla.

The industries of Ragtown, although in their infancy, and in all probability will mature in some other oil zone, are the Dorsey Rig Co., Marion Machine and Supply Co., with F. W. Holder, manager. This concern has a finely equipped shop and is doing well.

Black, Sivalls & Bryson conduct a tank shop, with J. A. Haren foreman. Mr. Haren originated at Woodfield, Ohio, and has followed tank building for many years. The

firm is kept busy, the class of work turned out meeting with satisfaction.

Two supply stores, the Republic and Frick Reid, have installed a full line of field trinkets, keeping the floor-walkers on the jump.

The spiritual end of Ragtown is in the hands of Rev. J. M. Bean, who was born in Nebraska, Pa. It was through the efforts of Rev. J. M. Critchlow that Ragtown has both a house of worship and a minister, Rev. Critchlow furnishing the means for building the church, and for Rev. Bean's salary. As the pastor's days have been spent mostly in lumber and mining camps, where he ever received kind treatment, the same can be said of the Ragtown element, with whom he has made scores of friends who honor him for his untiring work in showing them the better way.

I REMEMBER, I REMEMBER.

BY SLOCUM.

I remember, I remember down at Butler in Pa.,
We finished up a hundred-foot and drew our meager pay.
Then one and all desired to leave the land of snow
And journey down to Texas, where the drillers get more dough.

I remember, I remember when we struck the Lone Star soil,
'Twas a sultry day in August, and with heat our blood did boil.
I've a vivid recollection of a brimming Texas flood,
And of wading 'round a derrick through a sea of doby mud.

I remember, I remember of a norther's chilly blast,
When the boiler flues were leaking and the rotary stuck fast.
For three long days we suffered, then each, with one accord,
Did pray for sunny weather and the mercy of the Lord.

I remember, I remember how we used to cuss and swear,
And blame it on oil writers for us ever being there.
Then we'd cuss the Standard company, Independents we would rap,
And we'd cuss and cuss each other till we heard the landlord's tap

I remember of a roughneck who braved a midnight flood
To smuggle in some whiskey, and got stuck fast in the mud.
As we seen his shoulders disappear beneath the slimey ooze
He yelled : "I am a gonner, boys; but try and save the booze !"

I remember, I remember it was early in the spring,
When mosquitoes, bugs and rattlesnakes and every creeping thing,
Together with the centipedes, when e'er they got a chance,
Gathered 'round the boarding-house and did a song and dance.

I remember, I remember, that we could not understand
Why it was that Colonel Bowie fought and died for such a land.
We tried to bribe the farm boss to hit the southern track
And go and see if Mexico would take the blamed thing back.

I remember, I remember how with joy our faces shown
When, with pockets full of money, we struck old San Antone;
Where, at the Buckhorn tavern, we did our sorrow drown,
And broke the ten commandments before we left the town.

I remember, I remember of our trip back to the well;
We had soaked our coats and watches with a keeper of a cell.
Then we swore by Davy Crockett, and by Colonel Travis, too,
We'd freight it back to Pittsburgh, for with Texas we were through.

Equivalent to a gun-muzzle energy of 6,912,000 ft.-lbs.

¶They were casing a well down on the Samuel Kime farm, in the little village of Crawford Corners, Medina Co., Ohio, and were using 1640 ft. of 8¼'' 24 lb. "NATIONAL" Oil Well Casing. Suddenly the casing line broke--the elevator went out of business in a flash and 34,560 lbs., or some

1440 feet of

NATIONAL CASING

dropped 200 ft.

to a bottom of limestone! ¶What happened? Did the TERRIFIC impact reduce the pipe to a cracked, twisted and partly fused mass of junk metal? ¶NOTHING OF THE KIND. ¶They were able to use the SAME elevators to pull it out that had been used to put it in—because the "NATIONAL" Pipe was not even "swelled" enough to make this startling feat impossible. And when they drew out the pipe they discovered that two, and in three different instances, THREE sections had been—

It pays to be
NATIONALly
Prepared

National Tube Company

THE WOLF CREEK MYSTERY.

BY H. F. MADDOX.

I WOULD not say that the men of Wolf Creek, or First Creek, or Second Creek ever burned a South Penn rig. I would not even intimate that they did, because I do not know it, and it would be very unjust to them for me to make such an impression on the mind of any man. And there is another reason why I would not make such an impression. If I did, it is probable that a committee would await on me, or I would get a message saying: "It is all wrong, Alphonse; it is all wrong."

If I should do what I do not intend to do, and I should get such a message, it would not be an unusual procedure for the men of Wolf Creek and First Creek and Second Creek, in Jackson county, West Virginia, U. S. A., and the men who live on other creeks in this vicinity.

Once, after a rig was burned three years ago, bloodhounds were put on the trail of the perpetrators of the deed. I do not know what happened, but I do know that when the dogs entered a woods not far from the scene of the crime, that their owner took them from the train and that he left the country very quickly. I have said already that I do not know what happened, but I have heard the owner of these dogs say that he will never take them to Wolf Creek, or First Creek, or Second Creek again.

The county authorities announced, with much flourish, after the second rig had been burned that they intended to stop such lawlessness. I do not know what happened, or why they changed their minds, but I have it on good authority that the sheriff and all his deputies believe publicly that the rigs were fired by lightning. And the state fire marshal also took a hand in the game. It was announced that the state would spare no expense to stop crimes of this nature. Several deputy marshals made their appearance in the vicinity. I do not know what happened, but they stayed only a short time. In some cases the same team that drove them into the community turned around and drove them out again.

I would not say or intimate that the men of Wolf Creek, or First Creek, or Second Creek are not good, law-abiding citizens. On the other hand, I wish to state emphatically that they are. It was these very same people who a few years ago mobbed a band of robbers who lived among them. The robber band murdered a minister. They did not wait for the law to take its course. They captured three of the murderers. One they hanged, another they shot, and another was found with his head almost severed from his body. Other members of this robber band left the country. I do not know whether anything happened, or whether, in view of what had already happened, they decided that it was not a healthy place in which to live.

But I would not have any one believe that these men will hold hatred in their hearts. They do not, for a brother or two of the men they mobbed still lived among them and they considered him an honorable man. They had so much confidence in him that they elected him to the state legislature. But when he sold his vote to a candidate for the United States senate, they were glad that he was sentenced to the penitentiary. These men will give any man an honest chance. They were originally Virginians, but they do not try to learn much of their ancestors. Perhaps the reason is that their ancestors crossed the Blue Ridge because it was not a healthy country on the other side. I do not know that this is the case, but I know a young man who was greatly interested in tracing back his ancestry and he found that his great-grandfather had stolen a pig on the other side of the mountains. And since these people are Virginians, one would expect to find among them that hospitality for which Virginians are famous. This is what he finds. No stranger ever went from the home of one of them without food, if he was hungry, or without drink, if he was dry. I have been among them as a stranger, and they refused to accept money for the entertainment they had given me.

But all this is beside my story, which is of burning oil rigs, of warnings given by men who shoot well and to prove that men who love God, men whose character was never assailed and who have always been considered upright and just in all things, will, when they think their natural rights have been violated, stop at no extreme to right the fancied wrong. And because my story would be misconstrued if I did not, I must go back to the early days to explain why these people feel that their rights have been violated.

Not many years after George Washington surveyed and patented vast tracts of land in the Ohio valley, in West Virginia, another man patented several thousand acres in what is now Jackson, Roane and Putnam counties. What is West Virginia now was then a part of two or three counties in Virginia. It was hundreds of miles to the county seat of any of these counties from any of this patented land. These hardy settlers from over the Blue Ridge and the Alleghenies found the land, pronounced it good and, supposing that it belonged to the state, settled on it. They were in no hurry about getting title to it, because it was a long way to a land office and, thinking it belonged to the state, they had no fear of anyone ever trying to take it from them. And so many of them built their homes and improved the land. In a few years agents of the men who had patented the land came among them and told them that they would have to move on. They did not want to move on, but they could do nothing. So they bought the land where they had built their homes, this land they had considered theirs, and they paid good prices for it—more than the land was worth—because they had built their homes on it and they did not want to leave.

In making the deeds for this land the grantor reserved all minerals upon or under it. It was not considered mineral land, and among these men none, perhaps, had ever heard of petroleum or natural gas. So they little understood or cared for this reservation in their deeds. So little attention was paid to the reservation clause that in selling land to each other or to other set-

tlers they made clear titles to the land and in many instances owners of farms did not know that the mineral rights to their land had been reserved.

When the first oil men came into this country the people were slightly disappointed. They resented everything that the oil men did, but they paid good money for damages done to the farms, although they did not have to do it, and the farmers took the money and did nothing so long as dry holes were drilled. But when the first producer came in, it changed things materially. The oil companies suddenly discovered that the farmers had all the money they wanted. They refused to accept money for damage done to their land. They would not sell rig timber or haul casing or other supplies with their teams. They would not sell wood for fuel or provide lodging for men employed by the companies. These men refused to accept money from the companies for any service whatever or to perform any service of any kind for them—and this in the face of the fact that much of their land was being sold for taxes. I do not know whether the farmers were poor or whether they had all the money they wanted. It looked strange that they would let their land be sold for taxes. I thought about this, and I discovered that when land is sold for taxes in West Virginia the courts make a clear title for it, unless the owner appears and defends his interest.

But the oil companies were able to continue operations, even if the farmers refused to perform any service for them. They imported teams and teamsters, cooks and roustabouts. They pumped the oil from the first producer to drill the next well, and they continued to find oil. It was then that things began to happen in earnest. One man stood guard at the entrance to his land when a company started to haul rig timbers to a location on his farm, and because he was reputed to be a good marksman the teamsters did not enter his land. Of course they had no fight with the farmer, and the farmer had no fight with them, but they did not care to risk their lives for an oil company for five dollars a day. Some men, however, did not resort to such means to prevent wells from being drilled on their farms. Rigs were erected and oil was pumped from the first well for fuel. Drilling operations started because drillers and tool dressers, as a rule, are brave men and they do not become excited, even when they receive warnings. And sometimes bullets would strike the derrick, some of them uncomfortably close to the driller. But the holes in the ground gradually grew deeper and deeper, because these farmers had no quarrel with the drillers and tooldressers. They found another way.

I do not know exactly what happened. The driller never told me, and I have never seen anyone who heard of anyone he had explained to. But one morning there was no rig at one of the wells; it was burned to the ground. The men on the night tour must have known something about it, but when some farmer came around and asked how it happened, they said they did not know. I saw a 500-barrel tank of oil near where this first rig was burned. It had not been disturbed.

The rest of the story does not differ much from what has already been told. Other rigs were burned. How they were fired nobody knows. Operations were suddenly stopped, except on land that had been sold for taxes, and but a few wells have been drilled in the past three years.

THE WALKING BEAM.

(By Sandy)

Published in the Interest of Posey Co.

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A Red-Hot Editorial.

For the next couple of months there will be a decrease in the consumsion of tobacco, prune juice whiskey and other luxuries, bein' as swearin' off season is amongst us again. They tell me that history never repeats itself, but the feller who said it never lived in Mink City or he'd never said it.

Ever since we can remember there's been a general swearin' off during January an' February, an' sometime it lasts till the middle of March. Like sittin' around the stove in Joe Peter's grocery, it hez became a habit, and some can't no more keep from swearin' off New Year's day than keepin' time with their feet to a fiddle. But it's an ill wind that don't do some feller a little good. Fer instance, by the time the swearin' off season comes to an end, Cy Jones is cleaned out of his superfluous stock of gum an' chewing roots, etc., an' Doc Stenhouse utilizes the time in gettin' ready a supply of his Rattleweed Compound, which runs 50 per cent alcohol, fer the comin' demand. We hev reason to believe the season will be cut down some this year, as Joe Peters says that he has hed to order cloves 2 times since the first of January, and hez had inquiries fer parched corn by both Lem Koonce an' Bob Kramer, who were the first to swear off. Yesterday we noticed Abe Zimmerman pickin' splinters off a rail fence betwixt our office an' Cy Jones' store, which depicts the fact thet Abe will be expectorating fluid extract of Virginia by the time this editorial will appear in print. Yes, all signs point to an early resumption of the disposin' of luxuries in their regular channel of trade.

On the first January we decided not to issue the Walking Beam to them that hedn't paid fer it, until they did, but on lookin' over our list of subscribers we decided it would cut down our publication below that required fer second-class rates, so we decided to swear off doin' it.

Town Gossip.

Watch us git bigger.

We're fer Mink City first and lastly.

Lew Meggs sez that no difference where you go, you hev to start from where you are. Some philosopher is Lew.

Doc Stenhouse was a visitor at our office yesterday and left his subscription fer the Walking Beam, but he was too absent minded to remember he owed fer previous subscriptions.

Sol Skinner's oldest son, Ike, whom we spoke of in our last issue as waitin' till Melda Beggs, who was under the weather somewhat when they were to be married, an' put it off, hes got hisself in a nice pickle, bein' as it hez come to light he'd promised two or three other females out in Oklahoma he'd marry them. In Ike's case it looks to us as if Cupid hed used a gattlin' gun instead of an arrow.

With oil cummin' up, it begins to look as if Mink City will be puttin' on a prosperous attitude by spring time. Let's all pull together fer once and revive some interest, so to speak. There isn't a town in Posey county thet hez more room fer growin' than ours. Last fall we sit still an' let Briarville capture a cider mill 'an they hevn't quit crowin' over it yet. What's the use of us sittin' up nights when we ought to be in bed thinkin' up items fer the Walking Beam fer the benefit of Mink City, when you won't profit by it? This brings to mind that we have four back numbers of our last edition we would like to dispose of at a reasonable figure.

It hez come to our ears that the Walking Beam was on its last legs, an' it was Cy Jones thet said it, an' jist because we wouldn't stand fer him mixin' plasterin' sand with a pound of brown sugar a couple of months ago, and fer which he's bin dunnin' us off an' on ever since. Now, we've went to a big expense to give the readin' people of Mink City and hereabouts a good, reliable and substancial paper, suthin' they ought to appreciate. Why only last week we walked clear out to where Abe Zimmerman lives to report how Abe's folks were gittin' along, havin' heard that Abe hed killed a two-year-old steer for family use. Then the week afore, when we ought to hev bin seein' about advertising, we went down to Sol Skinner's fer sum more news, havin' heard that Sol hed finished the makin' of a lot of sausage, and Cy Jones hed the audacity to infer thet it wasn't news we was after. If Cy thinks he can hurt us by sich slanderous insinuations, we'll show him he jest can't. We expected our circulation to fall off durin' the winter months, as about every other one of our subscribers in this vicinity is interested in catchin' fur bearin' animals, an' when a feller hunts fur bearin' animals all day, he's ginnerly to dadburned tired to read even as interestin' a publication as the Walking Beam. We want to say right here that the Walking Beam is here to stay, an' if Cy Jones keeps on persecutin' us by vile reports, we'll quit patronizin' him and his store. We would hev quit afore this if Joe Peters hadn't gone into doing a cash business, an' us not bein' well acquainted at the county seat.

Trip Through Crab Creek Oil Field Discloses Interestin' Doin's.

Our old field criterion bein' laid up and under the care of Doc Stenhouse, which means Doc will keep him in bed till his money gives out, we decided to make a trip over the oil fields ourself and report the true state of affairs.

At the Cross Roads lease, said to be one of the best in the field, we were told by Lem Koonce that he was to give nothin' out fer information, at the risk of losin' his job, till the company got a lease on a two-acre piece joinin' their lease, as there two wells were dryin' up fast. Havin' promised Lem not to mention what he said, he stated the company were financially embarressed fer need of money to settle a coal bill, but was hopin' the recent rise in oil would help them out considerably.

At the Linseed Oil Co. a somewhat similer state of affairs existed, with the exception thet the company hed shut down three weeks previous and no one was about. Later we were informed the company hed swapped their holdings in the field fer a team of mules an' a wagon, an' when last seen they were headed fer Texas.

We found the Crab Creek Company in a flourishin' condition, havin' secured the loan of ten dollars from a feller who didn't know them any to well, and were runnin' there lease to its full capacity. Here we were promised a subscription to the Walking Beam.

It being' our first trip through the field, we were much impressed with the future magnitude of what it will be like in the future. Havin' notified the public that we were givin' the old field a general write-up, we expect numerous calls fer the comin' issue. We consider this write-up the best it has been given an' expect our contemporaries to quote us.

General Notes.

Sol Skinner, our town constable an' detective, undertook to part Jake First an' Pete Smudge, who got from loggerheadin' to fist fightin' about who'd whip in the European war, and Sol got badly hurt by allowin' his face to git in the way of Pete's fist, which made him madder 'n a wild woodchuck, an' he told both Jake an' Peter when they got through fightin' that the next time he caught them at it, he'd arrest both of them, if he had to do it hisself.

While playin' fox and goose with other scholars in Mose Ketchum's pasture lot an noon hour tother day, Amy Hooks fell and sprained her right ankle below the knee.

Society Notes.

Fer some time past we've been considerin' the advisability of givin' some valuable space to society doin's, being there's a heap of the above transpirin' thet would never be heard of if we didn't. The Briarville Breeze hez a society column or two an' we aren't goin' to let any dadburned, measley, illiterate, jumbled-up affair like the Breeze publish anything we don't, or vice versus.

Dan Bush sez that where 2 or 3 women get tigether, scandle is in there midst. There was a time we would hev sided with Dan, but we don't any more, bein' as most of our subscribers is women folks, an' from this on, now and henceforth, we're goin 'to see that women git their just rights in Mink City if we don't get one dadburned cent fer it. Follerin' is some of the doin's at Mink City an' surroundin's :

Miss Martha Hapstrung entertained fer supper Mr. Sam Felt last Friday evening. Sam lives down in Huckleberry Swamp, about four miles northeast of here. Sam hez been eatin' suppers at Martha's fer about a year now, and from what she said the other mornin' he'd be breakfastin' there soon. Martha blushed red when tellin' us, which makes us think it's true. The Walking Beam extends sympathy and congratulations.

Plates an' saucers were laid fer six couples when Phebe Spence entertained her intimate friends on the evenin' of her 35th birthday, though Phebe said it was her 21st. Hen Knuckels, who was there, said Phebe looked quite pert an' entertained with noticeable ability. She got some valuable presents, which included a three-months subscription of the Walking Beam.

The dance at Mink City, held on Xmas eve, for the benefit of the drum and fife band, hed to be put off till New Year's night on account of Kale Harp, who fiddles fer such occasions, gitten mixed up with a polecat while huntin' furbearin' animals with his best suit of clothes. Kale says no one felt any worse about it than he did.

THE OIL MARKET.

A YEAR ago, in the fields which produce the so-called "Pennsylvania Grade" oil, or an extra high grade product, operators were in the last stages of despair. The Seep Purchasing Agencies were paying but one dollar and a half per barrel for Pennsylvania Grade oil. Good producing territory was scarce—the average production from the old wells was but half a barrel or less—the daily production of oil in the United States for the year 1914 had been about 800,000 barrels—Oklahoma alone was producing more than 500,000 barrels—the other fields scattered over nearly every country on earth were producing some 300,000 barrels more. The outlook was indeed gloomy, and it is little wonder that the Pennsylvania, Ohio and West Virginia oil producers, optimistic as they usually are, were almost ready to cry peccavi, it is my fault, and give up the fight in disgust.

A year later we find the same agencies paying $2.35 for Pennsylvania Grade oil, an advance of eighty-five cents, with fair prospects of the market reaching $2.50 in the not remote future with the price of all other grades of oil following in their regular order.

Uncertainty seems to be the word that best expresses the future of the oil market; so much depends upon the supply and demand.

It is a common saying that you can hear almost every day that the price of oil should or should not be a certain figure without regard to the world's demands for the commodity or the world's capability of producing it.

Such people are merely expressing the wish, which is father to the thought, that such should be the case. It is true that great combinations can and sometimes do enhance the price of an article unwarrantedly, or depress it in the same manner, but such prices are but temporary and cannot last. They must be regulated in the end by the basic principle that is grounded on the supply and demand. The true price of any article or commodity is what it will bring in the great markets of the world, and all other prices must be regulated by them. The prospective fields for the production of oil in great quantities are being rapidly drilled over; the world's demand for oil and its numerous byproducts are increasing in the same ratio and the great question of the day resolves itself into this: Can the demand be supplied indefinitely?

If it can, the price of oil will be regulated by its ability to do this. If it cannot, then the future price of oil will be regulated by the degree of this lack of ability, providing that in the meantime some other substance be not discovered which may be used as a substitute for oil or its by-products in a great many ways.

It is pointed out that notwithstanding the great reduction in the amount of oil produced in the prolific fields, such as Oklahoma and

California, which occurred during the latter months of the year 1914, the total production for the year 1915 in the different pools of the United States showed an increase of production over the previous years of 14,752,541 barrels, though California alone shows a decrease of over thirteen million barrels.

The following table shows the comparison of the production of all the different States and fields of the United States, with the increase or decrease in each, and the totals for each for the years 1914 and 1915 :

	1915	1914
N. Y. and Penna....	7,114,570	7,424,597
West Virginia	9,150,863	10,459,733
Southeastern Ohio..	4,068,047	4,552,441
Kentucky Tenn.	479,366	516,110
Lima-Indiana	3,979,467	4,603,275
Illinois	15,588,493	19,330,245
Oklahoma-Kansas ..	121,919,773	99,820,245
Gulf Coast	22,906,779	11,980,000
Texas Panhandle....	5,591,422	8,513,367
Caddo Fields	15,940,393	12,507,436
California	89,768,298	102,871,907
Wyoming	5,164,737	4,360,000
Miscellaneous	200,000	180,000
	287,119,667	301,872,208

The apparent increase in the quantity of marketed production in 1915 is accounted for by the continued output of oil in large quantities from the Cushing field, Oklahoma, during the first half of the year, and from the Humble pool, Texas, during the entire year, as well as by the discovery and rapid development of new pools in Louisiana and Texas.

There is no table available which shows the amount of gasoline and kerosene produced. A few years ago automobiles demanded a high gravity gasoline, something above 70 gravity; now a much lower gravity is used, which can be obtained in large quantities from the heavy oils of California and the Gulf Coast, and from crude petroleum that at one time was not considered fit for the purpose. Meantime stocks are being lowered, and the amount that will go into consumption in 1915 will no doubt prove to have been larger than that which was consumed in 1914. It promises to exceed the total amount produced. More illuminating oil and more gasoline will be manufactured. The demand for the latter article is steadily increasing, and will continue to do so as long as automobiles increase in number. At present there is no prospect that the factories will lessen their output. Passenger and commercial cars sold in the United States in the year ending June totaled more than 700,000. Close to 2,100,000 cars were licensed in this country in 1915, and each car consumes on an average 500 gallons of gasoline a year.

With production decreasing and consumption increasing, it is to be expected that stocks will decrease materially during the next few months and, viewed in this light, it is to be expected that an increase in the price of oil will be shown, if (that eternal if) the situation is not materially changed.

The Oil City Derrick says: Since oil was first found in the Lima fields of Northwestern Ohio, there have been 67,284 wells completed, of which 58,815 were oil wells and 8,469 were either gas wells or dry holes. These wells were drilled by years as follows :

Year	Comp.	Oil Wells	Dry or Gas
Prior to 1890..	7,335	5,940	1,395
1890	2,151	2,010	141
1891	1,572	1,326	246
1892	1,465	1,277	188
1893	1,877	1,557	320
1894	3,001	2,561	440
1895	5,559	4,729	830
1896	4,339	3,713	626
1897	2,755	2,265	490
1898	2,852	2,485	367
1899	4,469	4,056	413
1900	5,129	4,535	594
1901	3,672	3,220	452

1902	4,439	3,971	468
1903	4,072	3,773	299
1904	3,131	2,908	223
1905	1,578	1,427	151
1906	1,535	1,373	162
1907	890	761	129
1908	848	768	80
1909	872	787	85
1910	572	515	57
1911	527	495	32
1912	551	481	70
1913	972	882	90
1914	861	766	85
1915	260	224	36
Total	67,284	58,815	8,469

The above figures show that 1915 was one of the lightest operating years in the history of the Lima field.

The wells for 1915 were completed by months as follows:

	Comp.	Prod.	Dry	Gas	Abd
January	10	68	1	0	17
February	24	845	3	2	28
March	15	178	2	1	45
April	18	332	2	0	90
May	19	258	2	1	108
June	16	287	1	1	61
July	21	141	6	3	48
August	25	273	4	0	58
September ..	22	700	0	0	44
October	24	592	2	1	32
November ...	39	666	0	1	96
December ...	27	246	3	0	36
Total	260	4586	26	10	663

What has happened and is now happening to the Lima oil field will be the history of all other fields; sooner or later the end is bound to come. It is now generally recognized that the extent of the productive districts in the United States has been fairly defined and that with the constantly increasing demand the production in the United States should be properly conserved. It is of the highest importance that the nation's interest in the remaining supplies should be protected and that the waste in production and utilization be eliminated.

Many of the States have already recognized the need of preventing waste and have enacted laws for that purpose.

In California, a year ago, hundreds of thousands of barrels of oil were being added to the stocks each month while today the trend is exactly the opposite, millions of barrels being taken out of storage and shipped to consumers in addition to the daily production within the last few months. The recent advances in the price of crude oil emphasizes this fact, as also does the advance in the price of refined petroleum, as well as the advance in gasoline and the lighter products.

As yet the different fields show but little increase in the number of drilling wells, but renewed activity along this line is expected in the near future. All the new work is being started practically on patented land, land which is not involved in present or prospective government litigation. It requires some nerve as well as considerable money to go out into the sage brush of the desert forty or fifty miles and start a wildcat well, hauling the material with mule teams through the trackless desert, locating a well with the water supply miles away and with the prospect of staying in this desolate country for years, with no one but coyotes and wolves for neighbors and with perhaps an equal chance of registering a dry hole in the end. But this is the way new fields are developed and you can always find some one to take the chances.

In the San Joaquin valley there are thousands of acres of prospective oil territory which all will in time be tested, but in a wild, desolate country like this, with the producing sand, if there is any, thousands of feet below the surface, developments must necessarily be slow.

The sudden withdrawal of vast tracts of this land by the government has in many cases proved a

great hardship to the operators who were in some instances compelled to vacate even after they had proved the existence of oil in paying quantities on the properties on which they drilled.

Operations in both the Midway and Maricopa fields are hopelessly tied up in this way, no one knowing exactly what the final result will be nor when an understanding between the operating companies and the government can be arrived at. But with all this the outlook for an active drilling campaign is bright for the coming year.

Since the first of the year ten new drilling wells are reported in the Midway and Lost Hills fields. In the Placentia field the Quintuple Oil Co.'s No. 3 has reached a depth of 2,200 feet and was reported at last accounts as drilling in a very hard formation, while the Standard Oil Company of California have a location made for their No. 2 on an adjoining lease, their No. 1 having proved to be a good producer.

The daily production in Oklahoma for the last week in December, 1915, by districts, was about as follows :

District	Prod.
Cherokee d. s.	29,050
Cherokee, s. s.	11,000
Osage	20,000
Cleveland	5,000
Cushing	100,000
Fox	4,000
Creek	51,860
Kay	2,600
Healdton	60,000
Total bbls.	283,510

Between this time and the present there has been a material decrease in some of the districts, notably in the Cushing pool, which today is producing not more than 90,000 barrels per day. This report shows a decrease in the Cushing pool alone since June, 1914, of over 200,000 barrels a day. This field was the largest ever discovered in the history of the production of oil, and for a time it certainly had the trade guessing as to where it would all end. But the history of this pool is but the echo of the history of other gusher pools of less brilliancy and bears out to a letter the oft-repeated expression that the larger the wells, the more rapid will be their decline. From this time forward no gusher pool will ever again exercise the influence or have the depressing effect on the trade that this one has had, because through it all the end can be judged to almost a certainty.

Cushing, during the first six months of the year 1915, produced 44,154,015 barrels, while the entire production for the year 1914 was but 47,222,250 barrels. From the last of June to the close of the year 1915 the decline was rapid, giving a total for the balance of the year of but 26,550,700 barrels. Still the production for the entire year, of this wonderful pool, reached the enormous amount of 70,704,854 barrels.

The attached table gives the rise and fall of the daily production for each month of the year :

Month	Daily	Monthly
January	238,514	7,393,934
February	204,000	5,712,000
March	233,120	6,911,720
April	288,600	8,658,000
May	241,000	7,471,000
June	266,750	8,002,500
July	204,000	6,324,000
August	181,250	5,618,750
September	142,000	4,260,000
October	123,250	3,820,750
November	113,000	3,390,000
December	101,200	3,137,200
Total bbls		70,704,854

Stocks in this field increased steadily during the last eight months of the year, showing a total amount in stock at the end of the year of 47,500,000 barrels, an increase from 27,796,650 barrels,

which was the amount in stock April 1, 1915.

There are numerous sands to be found in Oklahoma which vary from a depth from the surface of 70 feet to that of 3,454 feet. The deep well is the Alberti No. 1 which was drilled through the sand at a depth of 3,454 feet and started off at 800 barrels and is still holding up at something over 300 barrels. The sand from which this oil is produced is generally known as the Peru, though some think it is the Bartlesville.

The shallowest producing sand was found in a well near Dewey, and the deepest near Blackwell, in Kay county. Shallow wells as a rule are small; no gusher wells have ever been found in the very shallow territory, though paying wells have been found at a depth of 400 feet where a producing sand 20 feet in thickness has been discovered.

In the Texas panhandle the wildcatters are making unusual efforts to discover new pools, or at least to find an extension to some of the old ones. This is especially true of the Electra pool, although operators are fairly active in the Burkburnett, Petrolia, Strawn and Moran districts. In the latter nothing of importance has been unearthed as yet. The drilling here is very expensive on account of the great depth of the wells and the hardness of the different stratas.

The Producers Oil Co.'s No. 1 has been abandoned at a depth of 2,672 feet and the Corsicana Petroleum Co.'s No. 3 at a depth of 2,648 feet. Although all of the wells in this district have so far proven small, operators still hope to discover wells of larger calibre.

In the Strawn pool there are eight drilling wells and several locations have been made. The Electra and Burkburnett pools are about 16 miles apart; still a desperate effort has been made to connect them and small wells have been found all the way between them, but an actual connection has never been shown to exist. The best producing sand in these pools is found at from 1600 to 1700 feet and the best wells produce from 50 to 100 barrels per day.

Of the Gulf Coast pools, Humble easily takes the first place and has produced as high as 75,000 barrels per day. The following table gives the daily production of all the Gulf Coast pools at the close of last year:

District	Bbls.
Anse La Butte	85
Batson	1,775
Bland	75
Dayton	60
Edgerly	5,500
Goose Creek	370
Markham	450
Humble	74,000
Jennings	1,370
Saratoga	2,500
Sour Lake	11,300
Spindletop	1,000
Vinton	2,500
Welsh	110
Thrall	2,600
Total bbls	103,695

An attempt to extend the area of productive territory of the Sour Lake pool to the north and west ended in a dismal failure.

The deep test well of the Gulf Production Company at Spindletop was abandoned as a failure, being devoid of either oil or gas to a depth of 4,720 feet.

The output of the Gulf Coast pools for the years 1914 and 1915 by districts was as follows :

	1915	1914
Anse La Butte	36,000	39,000
Batson	658,265	730,731
Bland	24,088	55,839
Dayton	20,719	19,931
Edgerly	1,488,799	689,498
Goose Creek	150,141	144,000
Markham	123,585	158,286
Humble	12,548,980	2,879,887
Jennings	394,641	425,000

Saratoga	809,902	799,900
Sour Lake	4,254,550	5,093,499
Spindletop	383,770	383,770
Vinton	914,469	1,649,779
Welsh	41,335	35,000
Thrall	1,147,525	
Total bbls	22,906,779	13,084,120

Prices for this oil range from 60 cents to 90 cents per barrel, owing to the quality of the oil and the different contracts under which the oil is sold.

For more than ten years Kentucky has been struggling to get into the limelight as an oil producing State, and with the advent of 1916 shows more activity in new work than ever before. So far Kentucky has proved a disappointment as an oil center; still it has by no means been condemned, and now interest is being taken in leases all over the State.

Ravenna, Estill county, reports 3 wells completed lately, with several wells drilling. Wildcat wells are being drilled for several miles from the producing area in an effort to extend it both in width and length.

The runs for the last week in January, 1916, from the various Kentucky fields were :

District	Bbls
Busseyville	419.42
Cooper	1,003.12
Denny	967 13
Steubenville	1,047.09
Ravenna	116.74
Campton	340.10
Stillwater	242.94
Beaver Creek	185.93
Ragland	1,498.44
Parmleyville	727.88
Total	6,538.77
Daily average	934.11

Operators would do well to keep the pools of this State in mind, as it is thought by geologists and others whose opinions are worth attention that there is yet great possibilities for some of them.

In the Caddo field in Louisiana, where last summer and fall operations were almost nil, although territory was plenty on which the prospects were good for average wells for that field, drilling is becoming more active again, nine wells having been completed lately in the Caddo, DeSoto and Red River pools, having a combined capacity of 3,490 barrels, making a daily production for the three districts of 42,775 barrels. An unusual number of wildcat wells are being drilled in adjoining territory presaging a very busy summer in the oil fields of Louisiana. No new wells are being started in the Gusher Bend district and the future operations will depend largely on the success of those already under way.

At the close of the year 1915 nothing especially new had come to the surface in the situation in Illinois. Some effort was made to extend the Colmar field, McDonough county, further west, but it ended in a failure with the exception of the well on the Hamm farm, Lamoine county, which had an initial capacity of 150 barrels. This oil is produced from the Kirkwood and Tracy sand at a depth of nearly 1,700 feet. The well in St. Mary's township, Hancock county, was dry. The deep wells in Crawford and Lawrence did not have a production sufficient to keep up the decline in the old wells. The Ohio Oil Company has several thousand acres under lease in Fayette county which will be tested the coming summer. Some wildcat wells are being drilled in Wabash county, where a well has lately been completed said to be good for eight barrels.

Wyoming produced in the year 1915, 3,520,670 barrels, a gain of 804,737 barrels over that of 1914, which was 2,715,933 barrels. The prospects are good for a further gain for the coming summer, as

preparations are being made for a diligent search for new pools. Unusual interest is being taken at the present time in the gas fields of Wyoming, which are shown to be very large. A project is being worked out to pipe this gas to Salt Lake City, which will require a pipe line some 400 miles long.

The close of the year found the

Eastern pools very quiet, with the production gradually sagging to a lower level. There still remains a large amount of territory to be tested which is yet unattractive even at the present prices. Then you will find a great many people who are of the opinion that the market will go much higher, who are biding their time and are willing to wait until that time comes. The Dorseyville pool, Allegheny county, Pennsylvania, has lately put several good wells to its credit, but all are located well within defined territory and all efforts to extend the producing area have failed. The Evans City pool, which last summer was touted as a comer, has entirely subsided and nothing more is heard of it.

Efforts are still being made to put the Calgary, Canada, field on the oil map, with but poor success. The old Dingman No. 1, of the Calgary Petroleum Products Company, the only well there that ever did produce any oil to speak of, is being drilled deeper and has now reached a depth of 4,000 feet and will be drilled at least 1,000 feet deeper. They had a show of oil in this well at 1,500 feet, also at 2,700 feet, and at 3,892 feet.

Mexico produced, during the year 1915, 33,927,950 barrels, which was distributed among the different districts as follows:

Southern fields	28,817,010
Panuco	3,756,540
Topila	554,000
Ebano and miscellaneous	555,400
Isthmus of Tehuantepec	245,000
Total bbls.	33,927,950

This is an increase over the previous year of 7,692,547 barrels, the entire production for the year 1914 being 26,235,403 barrels.

In Mexico the wells are so arranged that they can be made to produce any amount of oil desired less than the maximum capacity of the well, by shutting them in and permitting them to flow just the amount wished.

The United States takes the bulk of the oil shipped from Mexico, although the demand for oil in South America is steadily increasing.

Exports for the year 1915 to the different points were:

To the United States	17,960,338
To Mexican coastwise	4,620,589
To South America	1,304,627
To United Kingdom	181,202
To Panama	119,522
To the Continent	55,939
To Cent. America and West Ind.	48,884
Total bbls.	24,381,101

There is no doubt if President Carranza succeeds in putting down the different revolutions and once gets the Republic on a safe peace basis that it will become one of the great oil producing centers of the world.

Since the last number of this Magazine was issued, in October, 1915, there has been quite a list of changes in the price of oil. At that time the market for Pennsylvania Grade oil was $1.75. On October 27 it was advanced to $1.80; on November 5 to $1.85; November 15 to $1.90; November 18 to $2.00; December 3 to $2.10; December 17 to $2.15; December 30 to $2:25, and on January 28, 1916, to $2.35, where it remains at the time of making this report.

The prices paid by the Seep Purchasing Agencies at the present time for oil of all the different grades mentioned below are:

Pennsylvania	$2.35
Mercer Black	1.85
New Castle	1.85
Corning	1.85
Cabell	1.88
North Lima	1.53
South Lima	1.53
Wooster	1.70
Indiana	1.38
Princeton	1.62
Somerset	1.73

Ragland	80
Illinois	1.62
Kansas and Oklahoma	1.30
Plymouth	1.43
Healdton	.75
Corsicanna Light	1.30
Corsicanna Heavy	.75
Electra	1.30
Henrietta	1.30
Thrall	1 30
Strawn	1.30
Moran	1.30
De Soto	1.20
Crichton	.95
Caddo 38 deg.	1.30
Caddo 35 deg.	1.20
Caddo 32 deg.	1 15
Caddo Crude	.90
Canada	1.93

STANDARD OIL SUBSIDIARIES.

Anglo-American	1 £	16½
Atlantic Refining	$100	625
Borne-Scrymser	100	275
Buckeye P. L.	50	109
Chesebrough Mfg.	100	730
Colonial Oil	100	160
Continental Oil	100	270
Crescent P. L.	50	45
Cumberland P. L.	100	52
Eureka P. L.	100	235
Galena-Signal Oil	100	155
Galena-Signal Oil pf	100	135
Illinois P. L.	100	178
Indiana P. L.	50	105
National Transit	25	33
New York Transit	100	205
Northern P. L.	100	104
Ohio Oil	25	198
Prairie O. & G.	100	405
Prairie P. L.	100	224
Solar Refining	100	295
Southern P. L.	100	220
South Penn Oil	100	350
S. W. Pa P. L.	100	120
Standard Oil Co. of Cal.	100	371
Standard Oil Co. of Ind.	100	495
Standard Oil Co. of Kansas.	100	440
Standard Oil Co. of Ky.	100	335
Standard Oil Co. of Neb.	100	340
Standard Oil Co of N. J.	100	497
Standard Oil Co. of N. Y.	100	207
Standard Oil Co. of Ohio.	100	545
Swan & Finch	100	125
Union Tank Line	100	85
Vacuum Oil	100	218
Washington Oil	10	50

Satisfaction Offsets Desire For Change.

Every automobile maker produces the kind of cars he thinks his class of buyers wants. Most makers study human nature with this object in view. No doubt this is the reason why some producers are annually making radical changes in their models, since the desire for change is a very common impulse.

"Still we have observed," says Alexander Winton, president of the Winton Company, "that the desire for change is not strong where a man enjoys satisfaction. If he is satisfied with his home, his business, his recreations, his family, his mode of life, you do not find him craving a radical change. The prudent man knows very well that the new thing may be only an illusion and that afterward he may wish he hadn't changed so radically. That's why the buyers of high-grade cars 'stay sold.' They know what they want, they are satisfied when they get it, and they let dissatisfied owners clamor for strange and experimental offerings. Meanwhile, the high-grade maker continues to weave new merits into his already meritorious car, and from season to season it gives its buyers a delightful new zest that is unaccompanied by any risk of disappointment. Thus the makers of successful sixes are continuing to make sixes; they have an excellence that today is years ahead of every other type. If this were not so, these makers would also be scrambling to cater to that desire for change which always attends dissatisfaction."

Changes in the Price of Oil

The following table, furnished by Mr. Amos Steffee, broker, Standard Oil Subsidiary stocks, 20 Broad street, New York City, gives the highest and lowest price paid for oil, each year, since 1860 :

Year	Highest	Lowest	Year	Highest	Lowest
1860	$20 00	$ 2 00	1887	$ 90	$ 54
1861	1 75	10	1888	1 00	71⅜
1862	2 00	10	1889	1 12½	79½
1863	4 00	2 00	1890	1 07⅞	60¾
1864	14 00	3 75	1891	81⅜	50
1865	10 00	4 00	1892	64⅛	50
1866	5 00	1 65	1893	80	52⅞
1867	4 00	1 50	1894	95¾	78½
1868	5 50	1 80	1895	2 69	94½
1869	7 00	4 25	1896	1 50	90
1870	4 90	2 75	1897	96	65
1871	5 15	3 40	1898	1 19	65
1872	4 10	3 00	1899	1 66	1 13
1873	3 05	1 00	1900	1 68	1 05
1874	1 90	45	1901	1 30	1 05
1875	1 65	90	1902	1 54	1 15
1876	4 23⅛	1 48¾	1903	1 90	1 50
1877	3 70	1 53¾	1904	1 85	1 60
1878	1 87½	78¾	1905	1 61	1 27
1879	1 28¾	63⅛	1906	1 64	1 58
1880	1 24⅜	71¼	1907	1 78	1 58
1881	1 01¼	72½	1908	1 78	1 78
1882	1 35	49¼	1909	1 78	1 43
1883	1 24¾	83¼	1910	1 43	1 30
1884	1 15⅝	51¼	1911	1 35	1 35
1885	1 12⅝	58	1912	2 00	1 30
1886	92¼	60	1913	2 50	2 00
			1914	2 50	1 45

Notice to Our Subscribers

This Magazine is published in January, April, July and October of each year.

It is intended, especially, as a book for reference in all matters concerning the Oil and Gas business, and we are glad to receive items from friends regarding the same.

The attention of the advertising public is called to the particular advantages our Magazine possesses as a medium between them and the general public, combining, as we do, the romance of the business with the sterner, drier facts and figures which necessarily go with it.

If you like the Magazine, speak to your friends about it; if you have any criticisms to offer, or improvements to suggest, call our attention to them. Each number will be complete in itself. Our usual high standard will be maintained.

Copies of this Magazine may be found on file in the British Museum in London, England, and the New York Public Library, 42nd St. and 5th Ave., New York City.

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THE OIL AND GAS MAN'S MAGAZINE

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"SCOUTING" A "MYSTERY"

BY MARGARET MITCHELL O'HARA.

FRANK Ford was enjoying a notoriety which afforded him almost as much pleasure as the possession of money itself: The Ford "mystery" was being mentioned in every paper and on every tongue from one end of the oil country to the other. He had personally leased nearly one thousand acres of land about two miles west of the Metz "pool," on which he had begun a "wild-cat" well, the expenses of which were being borne by Ford's partners, two Pittsburgh men with extensive holdings in the upper oil country. William Hayes, privately employed by Ford, had leased in his own name an additional four thousand acres, surrounding the block on which the test was being made. In the event of this well being a producer, these leases were to be sold and the money pocketed by Mr. Ford, the only representative of the firm in the field.

The well was now in the sand, the derrick was boarded up from the floor to the crown-pulley, and a "dead-line" had been run around the "mystery" at a thousand feet from it on all sides. Inside this line were placed several guards, excluding all visitors and "scouts." Four 250-barrel tanks had been erected near the well and one fine afternoon watchers outside the "dead-line," while closely scanning the well through field-glasses, observed a gas-like vapor rising from one of the tanks. This was noticed each time after the lead lines, running from the well to the tank, had been seen to shake violently as though the well was making a powerful flow. The walking-beam wagged slowly, creating a general impression that the well was in the "pay" and promising great results. Ford's "stool-pigeon," Hayes, mingled freely with the crowd, who knew of his holdings, but were not aware of his connection with Ford. The latter, who had remained in the derrick three successive days and nights, now for the first time crossed the "dead-line," called Hayes aside and conversed with him for a short time, then returned to the well, his manner indicating extreme annoyance and disappointment. When his confederate rejoined the scouts, he informed them that Ford had just offered him twenty-five thousand dollars for his leases.

"But that won't buy them," he commented decisively; "my price is forty thousand spot cash, and no less."

But when a little later an operator from Bradford, a well-known "plunger," made him an offer of thirty-five thousand, Hayes seemed to forget his positive assertion, and a verbal bargain was made, the papers to be drawn up the following morning, providing the Bradford man was still satisfied that the well was all she seemed to be.

Among those around the "dead-line" was Robert Baxter—commonly called "Bob"—alert and watchful. He and Ford were sworn enemies, each watching for an opportunity to "knife" the other, though as a rule square dealing characterized Bob Baxter's intercourse with his fellows, while Ford, on the contrary, would put the "harpoon" in his best friend, if such a procedure

spelled profit to himself. When Baxter learned of the deal about to be made between the Bradford operator and Hayes, he drew the prospective purchaser aside.

"I wouldn't be in a hurry about closing this up, Mr. Rhodes," he cautioned. "Thirty-five thousand is a good wad of money, and you know Ford's reputation for shady dealing. I think, before I'm many hours older, I shall find out something definite about this well."

"I wish you could find out something definite by nine o'clock tomorrow morning," returned the other, earnestly. "I'll give you two hundred and fifty dollars to learn the true inwardness of the 'mystery'."

"I'll try my best to earn that two hundred and fifty," was Baxter's equally earnest response, as they shook hands.

When it grew dark, the crowd watching the well dispersed, as their was no moon and, of course, no light about the derrick. At a neighboring farm house, where Baxter had obtained lodging, he ate his supper and retired to his room—but not to bed—and shortly before midnight he quietly left the house and struck out in the direction of the "mystery." During the evening meal he had managed to secrete a sandwich in his pocket, and now at a spring in the woods he filled an empty flask and, thus provisioned, he proceeded to the task before him. As he neared the "mystery" his movements became very cautious and when the forms of the guards became dimly visible he dropped on his hands and knees. In this manner he succeeded in crossing the "dead-line" unobserved. There was sufficient underbrush to conceal him and the darkness hid the slight movement of the tangle through which he crawled. All was silent about the well, drilling of course having been suspended until daylight.

During the day Baxter had noticed a hollow tree of considerable dimensions standing near the derrick and this was now his goal. Crawling through the large opening in its base, he drew himself to his feet and, as he expected, found the cavity to be of considerable extent. But so large was the entrance that he would risk detection by remaining on the "ground floor" after daylight; hence by the aid of various knobs on the interior of the trunk he drew himself up until he was several feet from the ground and no longer within range of casual observation. Two projections, larger than the rest, furnished him a fair foothold and, with the aid of a sharp pocket-knife, he cut a hole level with his eyes in the thin shell of the tree. It was, of course, unnecessary, as yet, to maintain this elevated position, but daybreak found him firmly established on the accommodating projections, his eye pressed to the peep-hole, every sense keenly alert. The usual daylight activities of the mystery were resumed — guards were changed, the boiler fired and soon the lead lines again quivered significantly. Early as it was, there were several enterprising scouts already on duty just outside the "dead-line" and to them, as well as to the watcher in the hollow tree, the vapor that now rose from the lead lines was heavier and more sharply defined than that observed on the preceding afternoon. An hour or two passed. Baxter had scarcely moved a muscle and nothing within his range of vision had escaped his observation. Men passed and re-passed his hiding place, but their low-toned conversation was unintelligible to the concealed scout. He found himself

regretting that he had not urged longer delay on the part of Mr. Rhodes — he feared the allotted time was all too short for the successful termination of his self-imposed mission. Suddenly his attention was attracted by Ford, who now emerged from the enclosed derrick and, with hands in his pockets, stood gazing somewhat indifferently about him. Finally his attention apparently became fixed on the very tree in which Baxter was a voluntary prisoner; then, much to that individual's wonderment, Ford proceeded, with cautious movements, to climb to the top of the tank nearest the hollow tree and which, as it happened, was the one from which the gasoline vapor rose with periodic regularity. As he stepped upon the tank, less than twenty-five yards from the tense-nerved scout, the latter caught the glint of a revolver in his hand. What did this mean? Did Ford suspect the presence of a spy in the tree? Would he shoot without warning? Would he dare to shoot if—


Shooter Loading Shell with Nitro-glycerine

Ford raised his hand, took deliberate aim and fired. From an overhanging branch above Baxter's head, a squirrel dropped to the ground. Baxter also dropped from his perch, crawled through the opening in the tree and faced the astounded Ford.

"Better be careful with your revolver, Mr. Ford; you might set that gas afire," was his sarcastic greeting.

Baxter's suspicion concerning the "gas" had been amply confirmed by the effect—or rather, absence of effect—of Ford's apparently reckless shot. Had the escaping vapor really been gas, that shot would have been his last. What was seemingly gas was only steam, conducted through a concealed pipe from the boiler to the lead lines, and when the latter were agitated to indicate an enormous pressure caused by a powerful flow, steam turned on at the same time completed the deception. But that ill-timed shot had exposed Ford's crafty scheme to fool the trade and realize a handsome sum on the territory leased by his accomplice, and while the baffled squirrel-hunter, chagrined and furious, stood swearing on the tank, Baxter triumphantly strode through the "dead line" for which there was no longer any necessity; and when, at nine o'clock, he received two hundred and fifty dollars from the grateful Rhodes, he considered himself well-repaid for his long vigil in the hollow tree.

OBITUARY.

L. A. Ostrander, one of the best known oil producers in Butler county, Pa., died Tuesday, January 11, at his home in Petrolia after a short illness. The deceased was born in Hornellsville, N. Y., but came to Butler county in 1885 and engaged in the oil business, which he successfully followed for many years. Surviving him are his widow and four children, Mrs. Arthur Starr of Butler, Mrs. Clarence Yeager of Petrolia, William Ostrander of Parker, and Clarence Ostrander at home.

Walter Campbell, widely known throughout the Butler and northern oil fields, died Saturday, January 15, in a hospital in Pittsburgh. He located in Butler about 25 years ago, establishing a machine ship, which he conducted until a few years ago. He was born in Scotland and came to this country in early manhood, locating in Buffalo, N. Y., where he learned the machinist trade. He left there during the McKean county development to make and repair oil well tools.

John K. Potts, well known in all the Pennsylvania oil fields, died at his late residence in Butler January 8, aged 68 years, death resulting from tuberculosis. The deceased was born in Johnstown, Pa., and was a son of the late Judge James Potts. After the Johnstown flood and for the past 18 years Mr. Potts had resided in Butler with his sister, Miss Gussie Potts. He was an expert accountant and was connected with several oil well supply companies in Parker and Oil City until his death compelled him to stay out of doors. He was unmarried and is survived by his sister, who made her home with him. Interment was at Johnstown.

Perry Smiley died at 5 o'clock p. m. Thursday, December 30, at his home in Bradford, Pa., following a lingering illness of heart disease. Mr. Smiley was born May 1, 1843, at Union City, Pa. He enlisted on February 4, 1864, as a sergeant in Company L, 12th Penn'a Cavalry, and was mustered out July 20, 1865. After leaving the army he returned to Union City, where he made his home for several years and where he was united in marriage with Miss Melissa E. Bacon. In 1877 he went to the Bradford field to enter the service of the tankage department of the National Transit Company as foreman of construction, locating at Tarport. He was a capable man in whom his employers placed implicit confidence, and promotions came rapidly until his appointment as superintendent of tankage construction for the Bradford and Allegany fields. Nearly all of the immense number of iron tanks formerly located throughout these fields were built under his supervision and when they were no longer necessary for the storage of oil here, they were cut down and shipped to western points under Mr. Smiley's direction.

Marcus L. Lockwood, formerly a well known operator and a prominent figure in politics in the Pennsylvania oil fields, but for the past few years more identified with de-

velopments in Oklahoma and Texas, died January 1 at his home in Tulsa, Okla. He was born December 5, 1844, at East Hamburg, N. Y., and made his own way in the world from the time he was 14 years of age, his father dying at that time. He went to the Oil Creek regions and became one of the oil scouts of that period. He operated with success in these regions and later in the Clarion and Butler fields, and became active in politics and in movements for the betterment of the producers and the public generally. He was sent to the Pennsylvania legislature, and a part of his work there was the championing of the free pipe bill. In national legislation probably more credit is due to him than to any other man for the work he did, with the co-operation of the late Senator Regan of Texas, in the framing and final passing of the act which created the interstate commerce commission.

Ira E. Ackerly, aged 65, secretary and treasurer of the Octo Oil Co., and one of the best known men in the Pennsylvania and Middle West oil and gas fields, died of pneumonia January 12th, in Pittsburgh, Pa. He was born in Kennedy, N. Y., and was employed for a time as a train dispatcher by the Erie Railroad Company, but shortly after his marriage in 1878 to Miss Mary Tarbell, of Rushford, N. Y., he went to the Bradford oil fields, where he made a study of oil and gas conditions and carried on extensive development work. He also operated in the Allegany, N. Y., field. His activities extended through Ohio, West Virginia and Indiana. He then visited California and British Columbia, and in the early nineties was interested in silver mining. Returning to Pittsburgh, he resumed his interests in oil and gas. He was known for his many charities and had a host of friends throughout the country.

NEW YEAR RESOLUTIONS.

BY JOHN YALLER CAT, COLONY, OKLA.

Ole year sure dead an' gone,
  An' like heap people do,
Me heap much think 'bout past
  An' take um quick review
Of all um evil deeds
  Me whole year long have done,
An' do resolve "me quit um all
  This Janooary one."

Some sin, heap grave, besetting,
  Stares each one in it face,
An 'when me heap much think
  An' see how plain a case,
Sure drop it head in sorrow
  An' shame at what me done,
An' do resolve "me quit um all
  This Janooary one."

Of your besetting sin
  Me heap no care to know;
Mine big, life-long struggle,
  Mine heap persistent foe.
Me never may undo it
  The evil it has done,
But sure resolve "me quit it all
  This Janooary one."

Me heap sure keep this pledge,
  Heap much pure, heap bright—
Me turn it new leaf over,
  Sure keep it heap clean, white.
Me sign um resolution,
  Just like paleface do, 'nen
Sure forgot an' wrote this verse
  On Janooary two."

PROPOSED TAXES WILL INCREASE COST OF LIVING.

The public is not slow in entering its protest against the imposition of unnecessary and burdensome taxes for national defense. The people are sending in protests to their senators and representatives, and it is apparent that any attempt to saddle heavy taxes upon the poor and persons of moderate means will be stubbornly resisted.

The fact that the people now paying war taxes have paid out $375,000,000 for the Panama Canal is enough to relieve them from further extraordinary burdens. The money they have paid in behalf of posterity should be returned to the Treasury through the issuance of bonds running over a long period Thus funds would be provided for national defense without putting an excessive load upon the present generation.

The proposed tax upon gasoline, oil, automobiles and small incomes is sure to pinch poor people. The rich can stand such a tax, but the poor in many cases cannot stand it. They will be deprived of cheap transportation, cheap substitutes for horses and carriages and cheap fuel, while being compelled to share part of their small incomes with the government.

It is a mistake now to impose extra taxes upon items that will fall mostly upon individuals who have already paid more than their share of the government's upkeep. The consumer is long suffering, but he has a vote with which to protest against an increase in the cost of living. The proposed taxes would be a direct increase in the cost of living. The reply to that will surely be an emphatic rebuke to the party responsible for it.

Hup Car Needed No Repairs.

The season at Exposition Park, Conneaut Lake, had closed—it was the latter part of September and the Mack automobile force were sitting around the office discussing the season's business.

"Well," said Mr. Mack, the manager, "while this has been a dull season for the park, we have had a nice business—one of the best if not the best since we opened here six years ago. We have had as many as one hundred machines in here in one day, and our repair force has been busy all season."

Then the question was asked: "Which car do you consider the best, for the price?"

One man thought the Winton, another thought the White, and so on down the line. After they were all through, Mr. Mack asked:

"Do any of you boys ever remember of having a Hup car in the shop, of all the Hup cars that have been in the park in the past six years? I don't think we have ever had one in the shop. All they asked for was gas and oil and they were on their way. I'm not boosting the hup, for we get less money from them than any car that comes into this garage, and I'm not talking for publication, but you have got to take your hat off to that car."

THE RABBIT FOOT WELL.

NOT CAUGHT IN A GRAVEYARD, BUT---

Back in the 80's Barnsdall and Ranger were operating for oil on the Ghittinger farm, near Moore's Junction, on the Ohio river, three miles below Marietta. With the completion of a number of holes, said tests encircling the lease with only a slight show of oil at the top of a 40-foot streak of sand, they swung into the center of the tract for a final venture, with but little hope of being rewarded for the expenditure of money.

To an uninterested party it looked as though the company were working on the old adage, "pursuit is better than possession." The top of the sand was struck at a depth of 625 feet, but, to the contrary of the wells drilled before, there was no show of fluid. J. O. Banks was letting out screw, with Harry McGrew as helper. When a depth of 650 feet had been recorded, Banks turned to McGrew saying, "It's as dry as a bone, Harry; you have dressed your last bit on this lease. We will run the bailer and finish with the next screw."

McGrew went out to the boiler, threw in a few shovels of coal and was on his way back to the derrick when he espied a dead rabbit lying beside the path. Picking up the dead animal, he carried it into the derrick and, unknown to Banks, fastened it to the sand line. As the bailer started down the hole Banks, by chance, turned and catching sight of some object as it disappeared, asked what it was.

"I tied a dead rabbit to the line," replied Harry, adding, "we have got to bust this hoodoo some way."

The hole was cleared of drillings and the bailer swung out of the way, with the rabbit still fastened to the line and the stem lowered for the final chapter.

At a depth of 560 feet Banks said, "Harry, oil was never found where there was none, rabbit or no rabbit."

He had no more than ceased speaking when there was heard a rumbling noise deep down in the hole than increased to a roar.

"Put out the fire," yelled Banks as he stopped the engine. "We've struck a gas pocket and if we don't look sharp the whole shebang will be ablaze."

The boys had barely done so bebefore a stream of oil was playing over the top of the derrick.

"Now look what you went and done!" said Banks, as McGrew stood gaping in open-mouth wonder at the stream of dark fluid that steadily increased, as though he doubted his own vision.

The well proved to be the sensation of the Ohio river valley for a time, the gauge showing an initial output of 1,800 barrels the first twenty-four hours.

Later the well came into the possession of J. W. Lockwood, who secured the left forefoot of the rabbit, had it set in gold and attached it to his watch guard as a memento of their streak of good luck, and he christened the gusher the "rabbit well."

Bessemer & Lake Erie R. R.

Time Table in Effect Sept. 13, 1914.

TRAINS LEAVE BUTLER.

Eastern Standard Time, as follows:

No. 12—4:40 a. m. (Note) for Erie, Conneaut, O., and Meadville.

No. 14—9:40 a. m. DAILY, for Erie, connecting week days for Hilliards, Meadville and Conneaut, O., and W. A. R. R. points.

No. 10—2:45 p. m., DAILY, connecting week days for Meadville and Conneaut, O.

No. 2—5:00 p. m. (Note) for Grove City, Mercer and Greenville, connecting with W. A. R. R.

No. 43—6:30 a. m. DAILY, for East Pittsburgh.

No. 9—11:45 a. m. (Note) for East Pittsburgh.

No. 11—6:10 p. m. DAILY, for East Pittsburgh.

TRAINS ARRIVE AT BUTLER.

No. 1—9:07 a. m. (Note) from Greenville.

No. 9—11:40 a. m., DAILY, from Erie.

No. 11—5:55 p. m., DAILY, from Erie.

No. 13—9:37 p. m. (Note) from Erie.

No. 14—9:25 a. m., DAILY, from East Pittsburgh.

No. 10—2:35 p. m. (Note) from East Pittsburgh.

No. 44—7:25 p. m., DAILY, from East Pittsburgh.

NOTE—Trains 12, 2, 1 and 13 on Main Line, and Nos. 9 and 10 on East Pittsburgh branch run daily except Sunday.

E. D. COMSTOCK,
G. P. A., Pittsburgh.

W. R. TURNER,
Agent, Butler, Pa.

Goodyear's Co-Operative Plan.

In a Christmas statement to employees, The Goodyear Tire & Rubber Company announces the establishment of a plan of retirement awards, and also a group insurance plan for Goodyear workers, male and female.

The company already has in operation a plan whereby Goodyear men, in offices, sales division and factory, who show conspicuous ability, are made "young partners" by acquiring common stock under easy conditions.

A home-building plan for Goodyear employees has also worked out with remarkable success.

The retirement awards make provision for stated monthly payments for life to men who have reached the age of 70 and women who have reached 65, and there is also a condition under which old employees may retire, with awards, under the age limits mentioned.

Under the insurance plan all employees of the company—in factory, in office and the company's many branches, are eligible.

In brief, Goodyear will give any employee upon its payroll an insurance policy for $1,000, free of all cost to the employee, provided the employee is or becomes a member of the Goodyear Relief Association, which provides sick and disability insurance and is already a Goodyear institution of long standing.

The "officers and directors," says the statement, "appreciating the spirit of foresight manifested by certain men associated with the organization, and believing that life insurance is one of the best means of providing for the future, herewith presents a life insurance plan.

"The directors also feel that persons who have spent continuously all or many of the most useful years of their lives in giving their energy and efforts to the common good of the organization are worthy of consideration from the company after their useful years are past and their ability to earn sufficient money is gone." Then follows the proposition in detail.

GERMANY'S OIL SUPPLY.

According to the German press, express petroleum trains have for several months past been running from Austria to Germany transporting petroleum and its products. Since July the amount so obtained is given as 450,000 barrels. The total available production of the fields for the year, with the reserves on hand, were estimated at 7,000,000 barrels, but more than half of this was destroyed or used by Russia during the occupation of the territory by her army, so that about 3,000,000 barrels remain for Germany. This is added to by shipments from Roumania, as it is reported that large quantities of petroleum pass the border into Austria daily. Thus it is evident that Germany is in much better shape as regards her oil supply than a few months ago, and there is no danger of an immediate diminution of the amount.

Commentaire du Livre

THERE ARE OTHERS.

BY J. L. HUNTER.

They will tell you down in Texas, if you let them have the floor,
That to settle down in Houston means to live forever more;
But remember, there's a Pittsburgh, built on forty-seven hills,
Where mosquitoes never bother you, and you're free from bayou chills.

They will tell you at Galveston, "here's the place to wash your feet,"
But your ready cash does dwindle when you sit down for to eat;
But remember, there's an Erie—the name my heart does cheer—
Where you get a dish of sauer kraut with every glass of beer.

They will tell you up in Dallas, "here's a harbor for us all,"
And feed you sweet potatoes from April until fall;
But remember, there's Chicago—oftimes called the windy town—
Where you get a yard of sausage when you throw a nickle down.

Even when in Corsicana you will find this to be true,
They will say, "bunk down with us and we'll take care of you;"
But remember, there's a village called Cleveland, on the lake,
Where it's flannel cakes to biscuits you will make a bigger stake.

Then there is San Antonio, an old, historic town,
Where you'll hit the free lunch counter, if you let them show you 'round;
But remember, there's a Bradford, where the Tuna water flows—
The boys will kindly greet you and not rob you of your clothes.

If, by chance, you stop at Waco, they will button-hole your vest
And say "if tired and hungry, here's the place to eat and rest;"
But remember, there's a Boston, where those who have the means
Can have one round of pleasure and lunch on pork and beans.

They will tell you when in Austin, "we've the burg of the southwest;"
Where, if you have the ducats, you can mingle with the best;
But remember, there's a Franklin, on the Allegheny shore—
Give me a boost to get there and I'll ask for nothing more.

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C. C. COCHRANE, Editor C. H. OLIVER, Business Mgr.

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CONTENTS

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FAMOUS "646" WELL DRILLED IN FOREST COUNTY. THIS WELL BROKE THE OIL MARKET MORE THAN 30c.

MOONSHINE.

How One Attempted Ghost Scare Led to the Search for Another. A True Oil Country Story Featuring Gib Morgan.

By M. H. Brexendorf.

ABOUT three miles west of the Butler Branch of the West Penn railroad, and forty miles north of Pittsburgh, lies the village of Saxonburg. It was settled back in the '50s by a colony of Saxons, hence its name. It is a picturesque hamlet and is laid out on a broad plateau overlooking a beautiful and fertile farming country.

A few years ago, through the discovery of a spring of water which is said to have wonderful curative properties, especially for rheumatism and diseases of the blood, Saxonburg has been brought into prominence as a healthful place to spend the summer month, and the place is fast becoming a popular resort. The town, however, owes its first rise into the limelight of distinction by the discovery of oil close to its quiet precincts, some thirty years ago.

One Patrick Golden, a well known Butler County oil contractor and producer, believing oil was to be found near Saxonburg, organized a company, leased a small piece of land about a mile or so from the town and began operations. In due course of time the drill penetrated the pay streak and the neighborhood was soon aroused to the fact that Golden has "struck ile" in such paying quantities that the future of an oil field was an assured thing.

As the news spread, all sorts of people flocked to the new Eldorado. Oil producers, drillers, tool-dressers, pumpers and those questionable characters who follow up the new strikes, coming from every quarter of the compass. A new town sprang up as if by magic and it received the nomenclature of "Golden City."

That was a prosperous time for little old Saxonburg. It awoke from its Rip Van Winkle sleep, the two stores the town contained could not meet the demands on them and were compelled to increase their force of clerks as well as stocks of goods.

In all such places where an oil excitement occurs one is always sure to find its full quota of crooks, gamblers, bums and card sharps, and these were not lacking in the new town. "Golden City" was not two weeks old before it had two or three gambling places, running full blast night and day. The worst element that the better minded had to contend with was the enormous amount of liquor sold illegally. Come effort was made to stop the traffic, but the authorities were unsuccessful and finally gave up in

despair. While liquor was not freely sold over the counters of the gambling joints, nevertheless it was to be had by those who were "on the inside." And not only in these joints was liquor sold, but it was to be had almost anywhere and at a ridiculously low price. For instance, one might see a man coming along dressed like a farmer carrying a basket of eggs on each arm, and to those that wanted liquor delivered privately, he would bring it in egg shells, but only those who were in the secret could get liquor this way. For example, the egg dealer would come to the door of a customer and ask if any eggs were wanted. If the customer really wanted eggs, he would ask for a dozen or half dozen, according to the quantity desired, but if he wanted liquor he would ask for six or twelve eggs instead of saying a dozen, etc. Sometimes a customer would desire both, and in that case he would ask for a dozen and six or a dozen and twelve. This often surprised the people who were not in the secret. There were other ways to dispose of the liquor, but the "egg system," as it was called, was the most favored.

Investigations were made by the authorities, and, to the surprise of the simple country people, it was found that no liquor was ever shipped to this place from any wholesale liquor dealer or distillery. It was very mystifying that those handling the stuff seemed to have an inexhaustible supply on hand at all times, but just where, could not be found out. All attempts on the part of the authorities to find a trace of the culprits proved unsuccessful. The liquor sold by these people was said to be better and cheaper than that handled by the licensed saloon keepers, and it affected their business to a great extent. As there was no sign of an illicit still anywhere, the people were entirely at sea and there was some talk of sending for a government detective, but this proved only a rumor and the particulars were never known to the public.

The prevailing gambling game was poker. Here and there in the various dens was to be found some other gambling device, but the main interest was given to poker-playing, and in a very short time there was scarcely a young man who did not know the game. So fascinating was the game that even the school children from ten to fifteen years of age could be found in stables playing penny ante.

The young men of Saxonburg organized a club which they named the "Lone Star Club." Anyone from eighteen years of age to sixty was eligible to membership, provided he was able to pay the entrance fee of $25.00. The members of this club rented a vacant house on the lower edge of the borough and at this place could invariably be found any of the young men of Saxonburg.

Among the odd characters that drifted to the town during the oil excitement was one known as Gib Morgan. He was a harmless old fellow who never worked much, but occasionally did odd jobs about the hotels and livery stables. It was said he was "a little off in the upper story," and very frequently he was made the butt of jokes played by the boys about town.

He was about five feet ten inches in height and from his build one would suppose that he had been a strong man in his younger days. At this time he was about sixty years old, but seemed younger on account of his great activity. He

wore a full beard that fell half to his waist, and his clothes were such cast-off garments as others gave him.

Old Gib had a knack of making friends wherever he went and was well liked by all who knew him. His main fault was his desire to drink up all the whiskey he could lay hands on, but he rarely ever got enough to do him any harm. He was noted for his story telling, and was often called "The Oil Country Munchausen," because of the experiences that were supposed to be his. For hours he would sit and relate stories of his early day adventures. They were on the silly fable order and could not possibly have happened to any one; nevertheless he had the ability to hold the attention of his listeners until the end and could always create a laugh in winding up his narrative.

He used to tell a story of an experience of his as a well driller. He was drilling a well of his own in Texas during an oil boom there and while at work he lost the tools in the hole, or in other words the cable had broken and had dropped the drill to the bottom. Being at a depth of about a thousand feet, he fished for the tools for some time, but failing in this, he decided to try and drill them out. He worked in this way for about six weeks, he said, and then was finally compelled to abandon the method, as the ground within a radius of half a mile around the well had raised six or eight feet, this being caused by the constant jarring of the earth. In conclusion he said, "I finally hit on a plan thet war so simple I wus 'sprised I never thought o'it afore." Some one asked what it was, and he said, "Why, I simply had twenty barrels er salve hauled ter ther well an' bealed ther tools out." This created a laugh all around; and such were the tales Old Gib told to entertain his friends, and they all seemed to enjoy them.

One day Old Gib was missed from his usual haunts. Inquiries were made for him, but no one seemed to know where he had gone, and as no one was particularly interested, it was just concluded that he had pulled out for parts unknown. But in this they were mistaken, for in about a week he appeared on the scene again and very much changed for the better. The customary stoop in his shoulders seemed to have disappeared and he looked much healthier. Another improvement in him was that he no longer drank to excess, although he still took a glass now and then. When asked where he had been, he would grin and reply that he met an angel unawares who had converted him. After his return he was not seen as often as formerly and, although this was noticed, very little importance was attached to it, and he was left pretty much to himself.

The change that had come over Old Gib did not affect his story-telling propensities any; in fact, they were somewhat increased, and some of the stories he told after his return were "whoppers," as the boys put it. This strange change in him, a peculiar, indefinable something that could not be accounted for, excited quite a little curiosity among the people who knew him, but, try as they would, no one could find out anything about it or anything concerning his whereabouts while absent. As time passed less attention was paid to him, and he finally drifted back into his old position, although he commanded a little more respect than formerly.

One evening the boys were gathered in the smoking room of the

"Lone Star Club," and, as usual, were listening to some of Old Gib's stories, when a young man by the name of Jack Stahley spoke up and said, "Gib, you have been telling us quite a number of stories about your experiences as an oil man; now tell us something of your private life, or about the Army, for I suppose you were in the Army, were you not?" There was no immediate response, so he continued, "Or tell us a ghost story; surely you have some experiences in that line." He noticed a gleam in the old man's eyes, and followed up his words with, "Yes, that's it; let us have a ghost story." "Yes, yes," chimed in the rest, "let it be a ghost story, by all means." "To be sure," said another; "perhaps a change will do us good," and this was followed by a laugh all around.

"Well," said Gib, with a grin, "I 'spose I kin give yer somethin' in thet ar line, too, but I kinder believe I cud talk a leetle better if I hed somethin' to 'wet up' on." This suggestion was not ignored, and the whiskey was ordered passed around. "Oh!" said Gib as he smacked his lips and held up his glass in which a portion of the liquor remained, "thet certainly ar good likker, erbout the best I ever tasted, and I reckon I orter know good whiskey from bad." Turning to one of the members, he said, "Say, Matt, whar d'ye git yer supply o' likker from anyways? I swan, I wouldn't mind hevin' er supply like thet ar myself."

"I'm sorry to say I can't tell you, Gib," returned Matt, "for we really don't know ourselves."

"How in thunder do ye git it then? Ye allus seem to be well supplied," said Gib. The reply was that they always left that to the man in charge of the club affairs and no questions were asked about where he got it.

"Well, now," said Gib, "hev ye never tried to find out by watchin' him?" "Oh, yes," was the reply, "but it is of no use; he always manages to outwit us."

Gib gave a grunt, but had no more to say, and suddenly fell into a reverie. From this he was soon aroused by some one slapping him on the shoulder and saying, "Well, well, Gib, are you going to sleep or are we to hear that ghost story?"

With an effort Gib aroused himself and looked up—he had been so deep in thought he had almost forgotten the story. Finally he said, "Come ter think on it, I wus goin' to tell yer a ghost story, but I swan I forgot all erbout it. Wall, let me see; I'll tell yer about er little experience that happened ter me while I wus in ther upper part o' the state."

He then commenced on a yarn that was pretty much like all the stories he was in the habit of telling. He told of most heroic acts, always done by himself, and as Gib never was known to be a very brave man, these stories naturally sounded very thin. Finally his story became monotonous and his listeners began to yawn and show other signs of weariness. One young man, unable to stand it any longer, interrupted him by saying, "Gib, what would you do if a ghost would suddenly pop up before you on your way home tonight? Gib looked at the speaker with a twinkle in his eyes; then he said, "Eat it, o' course; but on the level, when it comes ter down right earnestness, I don't believe in narry ghost or hobgoblin that ever came my way." The other replied with a sniff, "I'd just like to see such a thing happen to you for once, and I bet you'd

run for all you're worth." Old Gib just grinned and said, "Don't be too sure on thet, yer might lose yer money."

The other looked at him silently for a minute, then said, "Say, Gib, you know where the old Wagner place is that is said to be haunted, don't you?" "Can't say ez I do," replied Gib. "You don't know where the red haunted house is?" said the other incredulously "You have been in Saxonburg all this time and never heard of the old Wagner place? Why, Gib, you must have been asleep all this time."

"Oh—er—wall, now, come ter think on it, I did hear somethin' or other erbout a haunted shack of some kind about here, but can't say as I know 'zactly whar 'tis," said Gib. "Well," replied the club member, "I can tell you all about it. It isn't over half a mile from here, and to get there you just take the old Water Street road until you come to the borough limits where the road makes a turn to the right, and keep straight ahead. The first house to the right is the place. This house is said to have been haunted for the last two or three years."

"Well," said Gib, "what erbout the place?" "I'll just bet you twenty dollars to five that you are afraid to pass the place at midnight and not get scared at anything you may see or hear," challenged the young man. "I'll go yer," replied Gib, "but I don't want to bet on any sich odds ez that; I'll bet yer even money." Then, to the surprise of all, he drew out a roll of greenbacks as thick as your wrist, and peeling a twenty therefrom, placed it with the other man's money.

It was always supposed by every one who knew Gib that the old fellow hadn't a cent to his name, and that he told stories for what drinks he could get out of the crowd. Then to have him suddenly flash a roll like that was enough to make then open their eyes. The bet being quickly made, the money placed in the hands of a stakeholder, Old Gib calmly retreated himself and became unusually quiet. After a few minutes the young fellow who had made the challenge rose, and turning to Gib, said, "Remember, if you fail to pass this place at the given time, or if you are frightened by anything while passing there, you lose the bet, understand?" "Puffectly" replied Gib. Gib was then asked what night he intended to choose upon to decide the bet, and after a few moments' hesitation answered, "How will termorrow night suit yer?" "First rate," said the young man. He then turned to one of his companions and winked. They passed from the room together, and after walking some distance they hatched up a plot to give Old Gib the scare of his life.

Old Gib sat in the club room for a long time, thinking, but was finally aroused by someone asking, "Are you really going to carry out your intentions, Gib?" "And why not?" asked Gib. "Old Gib Morgan has generally allus bin known as a coward, but I'm goin' ter show yer all different an' I'll hev thet twenty, too." With this he rose and left the room. He was followed by all eyes and everyone was greatly puzzled at the change that had come over the old fellow who had always been considered such a coward.

The haunted house in question was, as stated, about a mile, or perhaps a little more, outside of the borough limits. It was a ramshac

kle old building, two stories high, that was abandoned some years before. All of the relatives of old Wagner had either died or moved away to some other part of the state, so the place was neglected and falling into decay. Weird stories were told of lights being seen in the windows, of the sounds of chains clanking, and of groans and shrieks being heard. To the knowledge of the public, no suicide or crime had ever taken place in or around this house, and for that reason people could not understand why it should be haunted. Yet such were the stories told and, as no one ever ventured near enough to investigate, the place was given a wide berth.

The following night found old Gib at the club as usual. He was not a member of the club, but was always welcome there. The time was spent about the same as on the preceding night, playing cards, drinking and telling stories. As it drew near to twelve o'clock the young man who had challenged Gib entered the room and said, "Well, Gib, if you are ready to earn that bet, come on; the time is almost up. Gib, with a nod and a grin, arose and followed the young man and his companions from the room. When they were outside he said, "Say, whar be ye fellows goin?" "Why, we just want to see if you do as you say you will," was the reply, "and we are going on ahead of you, just about ten or twelve rods to the other side of the Wagner place. We will await you there and I guess we can see everything that goes on."

"Go ahead," said Gib with a smile of amusement, and then to himself, "I suppose them two lads have put up a job on me, and won't I s'prise them?" He allowed the two to get some distance ahead of him and then he followed. As there was no moon, the night was rather dark, but the sky was clear and the stars gave enough light to enable one to distinguish objects at some little distance.

As Old Gib neared the Wagner place the dark outlines of the haunted house loomed up before him and he stopped. If any of his acquaintances could have seen him they would have had cause for surprise, for he produced a dark lantern and lighted it, then drew a revolver from his pocket and was about to proceed when he heard footsteps approaching at a run. It was the two young men who had started ahead of Gib and they were running as if the fiends were after them. They ran plump into Old Gib and almost knocked him down. When Gib saw who they were, he quickly concealed his weapon and lantern, then said, "Well, well, boys, what's yer hurry, an' what's got inter ye?" He noticed, too, that they were both minus their hats and coats and asked them what had become of them.

"Oh!" exclaimed one of them as soon as he could get his breath, "don't go down there, Gib. Did you not hear it? Gee, it was fierce." "Hear what?" asked Gib. "Speak up, why yer scared half to death." "Oh, gee, Gib," said the young man, "that shack is really haunted, for we not only heard cries and groans, but we saw the ghost." Thinking this a plan to scare him, Gib replied, "O shucks, you don't 'speck me to swallow any sech gaff ez that, do yer?" Then he again asked them what had happened to their hats and coats.

"Well, Gib, I'll tell you about it," replied the club member. "We had fixed up a scheme to scare you

so we went to the front steps of the house and took off our hats and coats, as we had intended to envelop ourselves in sheets so as to make you think we were ghosts. Well, we had just shaken out the sheets, ready to put them on, when we heard a most horrible wail and the clanking of chains. Just then we looked back of us—the door of the house was open, and a tall figure in white was coming toward us. That was enough for us and we lit out as fast as we could. Perhaps we would be running yet if we hadn't run into you." Gib listened quietly until he was through and then burst into a fit of laughter. Finally he quieted down enough to say, "Wall, I'll be durned if this ain't too good fer anything. Here yer bet me I would git scared at yer ghost, an' yer nigh got ther wits scared outer yer ownself, haw, haw, haw." Presently he said, "Say, boys, all jokes aside, are yer sure ye seen what yar say ye did?" "Gib, as sure as we are standing here we saw what we have told you and we haven't exaggerated a bit. I never took much stock in such rubbish as ghost stories, and it is hard for me to believe that was a ghost, but it certainly was enough to give a fellow a good scare, especially when he wasn't expecting to see anything." "Exceptin' me," said Gib in an earnest tone, which very much surprised the other two. "I'll tell you just this: if you really seen what you claim you did, and I don't doubt you, it's due to human agency; and say, by the way, perhaps it is just as well that you fellows were scared away, for if I had come up with you and your pardner in those sheets you might have got hurt." "How's that?" asked the club member. "Why, just this," said Gib, producing his revolver, "I might have shot at you not knowing who you were, and I might have killed you, although not intending to. And now," he said to the young men and two or three others from the club who had joined them by this time, I am going back into that house and I want to know if any of you fellows are going with me." He said he was about to sift this thing to the bottom and, if he found any one playing ghost, was determined to find out their purpose for doing it.

Gib's coolness and the fact that he was well armed, gave courage to the others, and they all expressed a willingness to see the night's adventure through. "Very well, then, come on," said Gib, taking the lead, and they quietly returned to the haunted house. When they reached the place everything was dark and quiet, and Gib cautioned his followers to be quiet also and not to speak above a whisper. The front door of the house was open, as the young fellows had said, and there were their hats and coats where they had laid them. They quickly donned these, as the night was cold and they were becoming rather uncomfortable without them. The young men hesitated as they came to the steps, but Gib strode up to the door, produced his lantern and flashed the light into the hall. Not seeing anyone, he turned to the rest and found them all staring at him with looks of astonishment. "Say, look here," said one of them in a whisper, "you seem to be pretty well supplied with everything; who are you anyhow?" Gib grinned good-natured and replied, "Well, that's a good one. Who am I? Why you ought to know me by this time. I'm Gib Morgan, of course; who else?"

"Well, I don't know," said the

other; "I always thought you were Gib Morgan, but lately you have acted so different that I don't know what to make of you."

"Oh, well," replied Gib meaningly, "you can rest assured if any change has taken place with old Gib it has been for the better; so come on, let us explore this old rookery and settle the ghost business right here." With this Gib started on up the hall, the rest following, but only half convinced.

They entered the room to the right, in the front of the house, and explored it thoroughly. Gib threw the rays of his lantern over the wall, and all that could be seen was a large knot hole in the wall between that room and next one to the rear. This wall was just a thin board partition that had been erected some time in the past to divide one large room into two smaller ones.

"Was this the room in which you saw the light?" asked Gib of the one with whom he had bet. "Yes," he said, "this is the room," and pointing to the windows that opened on the front of the house, he told him it was through those windows that they first saw the light. "And you say you saw the figure in the hall?" asked Gib. "Well—er—come to think of it, I believe the object I saw moving toward us was in reality right in this room and apparently going towards the front of the house, but I was so confused I must have thought it was in the hall." "I thought so," said Gib, with a grunt of satisfaction.

"Now," he said, "we'll have a look on the other side of the partition." Leading the way, he entered the next room and examined it closely, especially the knot-hole in the partition. After a few minutes' inspection he got down on his knees and searched the floor closely. Then, with a grunt, he got on his feet again, and turning to the others, with a smile, he said, "Well, boys, I think I am onto the ghost's way of working already."

"How's that?" was asked.

"Just have a litt.e patience," said Gib, "and unless I miss my guess very much, we will soon find out the whole busines ." Then he suggested that they go upstairs and see what could be found out up there; so accordingly they all filed up to the second floor. Finding nothing of any consequence there, they returned to the first floor, and Gib led the way back to the room in the rear, which apparently had been used as a kitchen at one time. This was really an addition built against the rear of the house and was only one story in height. There seemed to be nothing in this room of a promising nature; a few old boards scattered over the floor and an o'd cupboard built against the wall in one corner was all that was to be seen. Gib admonished his followers to be as quiet as possible and, turning the rays of his lantern ahead of him, proceeded to make an examination of the room.

"I've got an idea we ought to find some clue here that should lead to the identity of the ghost," whispered Gib. He then told the boys to stand very still for a minute and he would see what he could find.

Taking a step forward, he threw the light over the room until it rested on the cupboard; this he examined very closely on the outside, then opened the door and flashed the light inside. It seemed to be perfectly bare, but just as he was turning to leave, a small object that lay in the corner on the floor caught his eye. He stooped, picked it up and found that it re-

sembled a small piece of tile about the size of a button. This small object seemed to interest old Gib very much and after examining it closely he put in into his pocket, then went over the cupboard again on the outside. After a few minutes' investigation he turned to the others and asked if any one could get him an ax or crowbar somewhere, as he would like very much to have the use of one for a few minutes. One of the young men left the other quietly and in a short time returned with a pickax, saying that was all he could find and had picked it up at the side of an old house.

"This will do first rate," said Gib. "Now, have any of you chaps got any weapons about you? If so, get them out, for me may need them." A moment's time brought to light three revolvers and a jackknife. "The guns may come in handy, but we may not need them at all," said Gib. "I hope not, anyhow," he added.

"Why, what do you expect to run up against; an army?" asked one.

"I'm sure I don't know, but you can't always tell, and it is best to be prepared for anything," said Gib.

"Oh, I guess we can hold our own with the ghost if we find him, but I don't see how you are going to produce him out of that cupboard and with that pickax," said one of the men, with a smile.

"Boys," said Gib, "this cupboard is nothing more than a cleverly-concealed door; where it leads to I don't know, but we're here to find out, and as we may run into danger, it is best to have our wits about us and have our guns ready."

Then turning again to the cupboard, he inserted the edge of the pickax into the back of it and proceeded to pry gently. Soon a snap was heard and the whole cupboard moved noiselessly, revealing a four-foot opening which apparently led off under the hill. The young men looked blankly at each other and then at the opening.

"Why," said one, "that's queer; this ought to lead out into the yard, but it doesn't." Then going to the door that had been put in when the house was built, he opened it and looked out. In a few minutes he came back and said "I see now how it is; this side of the house is so close to the hill that the ground has gradually slid down and has filled up the space so that it would be an easy matter to dig a tunnel through it."

"So I supposed," exclaimed Gib. "Well, come on, let's see if our ghost is in here or not; but be quiet and careful."

They had to stoop slightly and go single file. They crawled on in this way until they suddenly emerged into a cave-like chamber about twenty feet wide and thirty feet long, with a very high roof. It seemed to be a natural cave of some kind, but was in reality an abandoned coal mine, the tunnel of which led under the hill, and the tunnel leading from the Wagner house was a sort of side entrance.

The cave in which they stood was apparently used as a storeroom, for barrels and kegs and cases of bottles were ranged along the walls. They listened for a little while and presently heard a low murmur coming from somewhere ahead of them. Gib opened the slide of his lantern, made a motion for the others to remain where they were, then strode silently across the floor in the direction of the sound of the voices, and finally discovered a door concealed behind some bar-

rels that were piled up to the roof of the cave. Gib beckoned the others to come to him, and pointing to the door he whispered, "I think we shall find our ghost in there, and judging from the looks of things, we'll find something else of interest to us and to the people in general. Now, boys," he added, "get ready to follow me and have your guns ready, too."

With this he advanced to the door and opened it by giving it a gentle push.

When the door opened they beheld two men busily at work at a whiskey still. These men had not heard the door open and consequently were ignorant of the fact that they were being watched. To the young men of Gib's party this scene was something new, and they could only stare with wonder; but Gib was not so much amazed. He had his revolver in hand and broke the silence by saying, "Good evening, gentlemen; you seem so very busy that you can't welcome callers."

At his words the men quickly turned around and found the barrels of four pistols staring them in the face.

"Who in the devil are you?" said one as soon as he recovered from his surprise.

"Oh," said Gib, "just a few visitors that didn't scare at your ghost worth a cent. And so this is where all the cheap whiskey comes from, is it?" Then he commanded the fellows to throw up their hands and to be quick about it.

"There, that'll do," as the two men raised their hands in the air. "Jack," said Gib, addressing one of his companions, "just go through these gentlemen and see if they have anything in the way of weapons about them."

The men evidently had thought themselves safe enough here, for not so much as a jack-knife was to be found on either of them. After they had been thoroughly searched, Gib reached in his pocket and produced two pairs of handcuffs, which he tossed to Jack Stahley saying, "Here, Jack, just put these on the gents for safety's sake."

The men offered no resistance, but quietly submitted to being secured. This accomplished, Stahley turned to Gib and said, "See here, we have followed your lead blindly, and so far have done just what you told without knowing what we were about. Now I think it is about time we had an explanation from you." Then he added, "I have no doubt you know what you're about, but it is no more than right that we should know something about this business."

"Yes, Jack," replied Gib, "I owe you all an explanation, and as there is no time more fitting than the present, I will do so now."

He seated himself on a keg, and the others found seats, too, and prepared to listen.

"In the first place," began Gib, "I am not Gib Morgan, but a detective with the United States Revenue Service. About a month ago we received word that it looked very much as if there was an illegal distillery around here, for liquor could be had in quantities and at a low price; so I was detailed on the case.

"The night I arrived here I came across Gib Morgan, who is an old acquaintance of mine, and after he had told me about himself and how well known he was here, I conceived the idea of sending him away and taking his place for awhile. I paid him well to take a little vacation, and he did so willingly.

"It was not long until I was convinced that there was something in the belief the authorities had concerning the illegal whiskey business, but I was unable to find out anything to give me a chance to work on until you accidentally gave me a clue by your ghost story. I quickly jumped at the conclusion that if anyone was playing ghost there was a method in their madness, and I started to work with the result you all know.

"My name is George Meredith," and with these words he took off his false hair and beard and revealed himself to be a young man not over thirty-five years of age. This was quite a novel experience to the young men and they were proud to have had a hand in assisting the detective in this adventure.

The detective then turned to his prisoners and said, "Now, my men, we'll have a few words with you. How many of you are there concerned in this business?"

"Find out, if yer so darned smart," was the sullen reply.

"Now, see here, my friend, if you know what is good for you, you'll tell me all you know, for we have you dead to rights and it will go all the harder with you if you act obstinate about it," said Meredith.

"I don't see what yer kin do," was the reply; "we're only hired ter do the work and hev no interest in the business at all."

"You don't seem very well posted on the laws of the country," said Meredith, "so I will tell you right here that by consenting to work for the outfit you have got yourself in as deep as they are, and will be likely to get a heavy sentence unless you turn State's evidence and make a clean breast of the whole affair."

A look of alarm spread over the man's face at this, and he asked eagerly, "Will yer let me and my pal go if we tell all we knew erbout it?"

"I can't promise you that, but I will try to get you off as easy as possible," said Meredith.

The man pondered for a minute and then said, "What do yer want ter know?"

"Who is at the head of this concern," asked the detective.

"I don't know who ther main guy is, fer I never seen him; but a feller by ther name o' Job Sweeny comes every other week to look things over an' pay us our wages, which is fifteen dollars a week; but who the boss is I hain't never heard," said the prisoner.

"So it is Sweeny, is it?" said Meredith. "I have met that gentlemen before and don't need to ask other questions, as I am pretty well acquainted with his methods. Now when do you expect Sweeny here again?"

The fellow said he expected him the very next night, as it was the end of the month and also pay day.

"Well there is just one thing more I want to know," said Meredith. "Who are the agents here that deliver and sell the liquor in this neighborhood?"

The prisoner told them that he really didn't know who it was, he thought it was someone about town. He said he was a stranger there and never left the cave and that Sweeny always met his agents in another room. He also told them that they played ghost with a moving picture machine in order to keep the people away.

"So I thought," said the detective. Then he suggested to his followers that they had better leave the cave, as morning was approach-

SAN ANTONIO.

The Battle Ground of Texas--Hallowed by the Memory of Bowie-Travis and Crockett--Who Gave Up Their Lives for Freedom--A City of a Mixed Race--The Town Attracts Operators From Far and Near--The Story of the Alamo.

By J. L. Hunter.

HAVING in younger years read the "Life of Col. David Crockett," who bravely met death at the Alamo while fighting to free Texas from Mexican tyrany, it was not with feigned interest that I stepped from an early morning express as it came to a stop at the I. N. G. depot at San Antonio, Texas, and made my way up Houston street, passing scores of one-story dwelling built of stone and doby mud, with here and there more modern structures, yet, in architect, modeled after the abodes of the Spanish of a century ago. Crossing a bridge that spans the San Antonio river, a stream narrowed to less than forty feet wide by stone walls, and the little doby habitations gives way to elegant brick and stone structures, for you are now in the business section of the city.

From the river the ground gradually rises for a distance of several blocks, then falls away in a gentle slope to the south. The summit of the rise not only marks the business center of the city, but one of the principal points of interest, for here, with sombre, gray walls, in strange contrast to the beautiful building surroundings, stands the old mission house—the "Alamo"—where eighty years ago was fought a battle that for bravery and endurance on one side, and for fiendish atrocity on the other, stands unparalleled in the history of American warfare.

No city on this continent has such a bloody record as San Antonio, and no city in Texas is surrounded with such historical association or more beautiful to the eyes of tourists. From its first settlement by the monks in 1692, to its final capture by the Americans in 1836, it was well named the "city of the sword." History and legend cling to it like ivy to the oak, and the old town wears with pride the two hundred years of its existence.

The site chosen by a few Franciscan monks for the building of a town was a wild wilderness hundred of miles away from civilization and surrounded by savage and war-like tribes. To them the picturesque hills, plains, valleys and winding rivers was an earthly paradise. The river was given the name San Antonio, and on its banks they built a mission out of the white stone quarried from the neighboring hills that, when finished, rose in gracefulness and spires above the cottonwood trees that

surrounded it. With its completion it was given the name, Alamo, the Spanish name for cottonwood, a name that was destined to be a battle cry that was to strike terror to the hearts of the Mexican foe.

The Alamo was built not only as a place of worship, but as a refuge when attacked by the savages, who resented this invasion of their lands by the aliens. The outer walls were three and one-half feet thick, the one double being constructed of heavy oaken timbers, making it impossible for an attacking force to gain an entrance. Adjoining the Alamo on the east was a large court surrounded by a wall of stone three feet in thickness and fourteen feet high. In later years all but the west wall was lowered to eight feet. The inclosure not only made a most formidable fortress in time of war, but a corral for cattle also.

Flowing Well at Alta Vasta, Texas.

It is true that the priests had to fight as well as pray, for the Indians did not suffer them to take possession without protest, but what the monks had taken they kept, and soon around this gothic-like fortress sprung up a city around which romance and mystery gathered.

For more than forty years the Indian and white man fought around its gray walls for supremacy. From 1819 to 1821 its streets oftimes ran red with blood from fights between the royalists and republicans as the city passed from one power to another. When it came to the question of freedom and American domination, San Antonio then became known as it is today, the great Texas battlefield.

We will touch but lightly the stirring incidents that followed the expulsion of the Spaniards from Mexico, in which many Americans took a part. This was followed by the famous Constitution of 1824, that was particularly pleasing to the American settlers, as the local government of every State was left to itself. Santa Anna, after ten years of brawling insurrections, became president and dictator, to soon forget the noble part taken by Americans in freeing Mexico from Spanish yoke. Becoming jealous and fearful that the liberty-loving Texans would in time set up a government of their own, the decree went forth that only military law should prevail. There should be no trial by jury, no system of public school education, denying the right to worship God according to the dictates of conscience, and that the colonists should give up their arms, which were necessary in

those days for both protection and securing food.

It was these memorable wrongs that led to the declaration of the independence of Texas. When Santa Anna heard of the stand taken by the settlers, he sent General Coz, with a well-equipped army, to San Antonio, with orders for all Americans to give up their arms on the penalty of death. Warned of their coming, the Americans, too small a force to enter into combat with General Coz, left the city, but before retiring they posted the following notice on the walls of the Alamo:

"To Santa Anna: If you want our arms, take them. Signed, Ten Thousand American Texans."

Upon the arrival of the Mexican army, the few Americans who were loath to leave the city were relieved of their arms; a number were shot, this by Santa Anna's order, to intimidate others. Enraged by the acts of cruelty on the part of the followers of Santa Anna, forebearance on the part of the Texans ceased to be a virtue, and courtiers, mounted on fleet steeds, sped over the plains, heralding the Mexican dictator's proclamation for all Americans to disarm, and advising them to arise and strike a blow for freedom. The cry was echoed back from the lowlands of Tennessee, the mountains of Kentucky and from far-off Pennsylvania and the New England states to "stand by your rifles and we will come to help you." By this one proclamation Santa Anna had raised a storm that was destined to free Texas from a tyrant's yoke and send him, a despised murderer, back across the Rio Grande.

In answer to the dictator's proclamation, a sentinel, stationed on the roof of the Alamo on the morning of December 1, 1835, hurriedly made known to General Coz that a large body of men were encamped on a rise of the prairie a mile distant from the Alamo. General Coz mounted the lookout and, after a few minutes' survey of the hill, remarked: "A band of American braggarts; their bones will bleach on Mexican soil; we are five to one," and giving orders to take no prisoners, cannon were shotted and preparations made to resist an attack.

Perhaps not in history were a similar army of men gathered together in the cause of freedom. Eight hundred strong, they represented the brawn of the woods, field and shop. Every man used to hardship and all familiar with the use of firearms, and with men like Burleson, Travis, Bowie and Crockett to lead them, General Coz was soon to learn that they were anything but braggarts.

Dressed in homespun and deerskin suits, presenting a sore contrast to the richly uniformed soldiers of General Coz, the little Texan army, their features betraying grim determination, advanced on the fortified Mexicans. Gaining the city they, in Indian fashion, sought shelter where opportunity offered, picking off the enemy, who, despite the fact that they outnumbered them five to one, were compelled to seek shelter behind the walls of the Alamo. Day after day the siege was kept up.

Then came the 11th of December, a day marked with a white stone in the history of Texas. On the morning of the 11th, General Burleson, upon learning that they were running short of ammunition, called a council, at which it was desired to carry the Alamo by storm. The decision was met with a cheer from

and don't throw away a bullet. If die we must, let us die as true soldiers," he said as he watched preparations for the attack.

Flushed with the assurance of an easy victory, a thousand Mexicans detached themselves from the main army and, led by officers richly uniformed, marched on to the attack. Nearer and nearer to the Alamo, and still all was silent within the fortress. The officers were congratulating themselves over it being a bloodless victory, when a sheet of flame from more than a hundred rifles flashed from the ramparts, the leaden hail sweeping away the front ranks of the Mexicans, throwing into confusion those in the rear, who, despite the command of the officers, beat a retreat, which was hastened by a second volley that strew the ground with the dead and wounded. Nor did they stop until well out of reach of the bullets from the deadly rifles of the Texans, who, penned up like cattle in a corral, with human wolves on every side seeking to destroy them, seen that every bullet found its mark.

Again and again the Mexicans, goaded on by Santa Anna, renewed the attack, but that little band of Texans, standing firm as the stone wall which sheltered them, beat off their assailants. Day after day the unequal contest was kept up until the plazza that surrounded the Alamo was red with the blood of the dead and dying Mexicans.

Almost insane with fury because of his army of well-fed and well-equipped soldiers were held at bay by a mere handful of despised Americans, who had already killed or wounded one-third of his command, Santa Anna, on the morning of the third of March, ordered a company of his men to wheel one of his larger cannon to within two hundred yards of the stone enclosure to batter down the walls.

Forced to obey, the field piece was dragged into position, losing a number of his men in the act. But the gun was never fired, for at this moment a man clad in buckskin suit, his wavy black hair surmounted by a coonskin cap, appeared on the parapet, carrying a long-barreled rifle. This man was Colonel David Crockett, statesman, hunter and soldier, and one of the best rifle shots in the South. For a moment he stood there, his eagle eyes fixed on the scene before him; then the rifle flew to his shoulder, a report followed and the Mexican that was in the act of firing the piece threw up his hands and dropped to the earth. With almost lightning rapidity, Crockett lowered the gun from view with his left hand, to receive another with his right; one glance along the bronzed barrel and a second attempt to fire the piece was frustrated by a bullet from Crockett's rifle. All day long the brave defender of the Alamo stood at his post, foiling every effort on the part of the Mexicans to fire the field-piece.

Notwithstanding the defenders of the Alamo had more than held their own against great odds, they knew that unless reinforcements soon arrived their doom was sealed. If word could only be gotten to Colonel Fanning, who, with 400 men, was stationed at Goliad. They had but a few rounds of ammunition left. Who would volunteer to carry the news to Fanning? Travis had but to ask, for there were a score of brave hearts within the enclosure ready at the word to make the attempt. A lifelong com-

band. The Americans fought as men never fought before. Again and again Santa Anna hurled or literally drove his men up to the very gates of the inclosure, only to see them driven back by the deadly fire poured into their ranks from loophole, parapet and embrasure of the stone wall that enclosed the court. The ammunition was now down to one rund to the man, and Travis was about to give the order for his men to take shelter in the Alamo, when his ear caught the discharge of rifle shots in the distance. A gleam of hope sprang up in his breast. Had succor arrived? Quickly mounting a parapet, he saw, not five hundred yards distant, a man mounted on a cream-colored, powerful-built horse, dash into view from over a rise in the prairie. With flying leaps he witnessed the animal bear straight down on a line of Mexicans, saw the rider bend low in the saddle as the horse plunged through the living walls and on towards the Alamo. When within one hundred yards of the enclosure Travis cried. "Throw open the gate; it's Colonel Boneham." The order was obeyed and a moment later Boneham, greatly fatigued with long hours in the saddle, grasped Colonel Travis by the hands, saying: "Travis, Fanning is in danger and cannot leave. I came back to die with you!"

The order to take refuge in the Alamo was at once obeyed, the heavy oaken doors firmly fastened, there to await the final scene in the bloody drama.

Massing all of his troops, Santa Anna once more ordered an assault. This time no rifle shot answered their loud yells and, with cries of victory, they swarmed into the plazza. Santa Anna, who was a coward at heart, having kept out of danger during the siege, rode up to the door of the Alamo and demanded their surrender, which was met by a shout of defiance from the Texans. Knowing death to be their lot, Travis drew his sword and marked a line across the cement floor of the building, saying: "Comrades, we are doomed to die. Those who wish to surrender have that privilege to do so. All who wish to stay with me and fight till the end, come over to this side of the line." Every man but one crossed to where Travis was standing. Colonel Bowie, lying on a bed in a small room, asked to be carried out and placed on the side of the line that meant a violent death, where he lay with his favorite bowie knife grasped in his weakened hand. The one that surrendered, though badly wounded, managed to get away during the fight that followed.

Upon learning of the Texans' decision, Santa Anna placed kegs of powder against the door of the Alamo and blew it open. Then took place a struggle that has gone down in history as unsurpassed by demons of the dark ages.

With the crashing in of the oaken door, Travis, in a voice that rang out above the surrounding din, cried: "We are giving up our lives for freedom; let us die like brave men!"

Appalled by the fury of the Texans, the Mexican horde faltered, fell back; and then, forced on by Santa Anna, a fiend incarnate, they fought their way into the Alamo. Scores fell, but others took their places. Travis fell at the very door. Emptying his gun into the struggling mass of Mexicans, Crockett clubbed his rifle, dealing death blows, finally secumbing, his body

ing to the right, again to the left, you can travel for hours, and if not acquainted with the city, it is an even chance that you will arrive at the starting point. In one sense the city stands alone among the sister towns of the Lone Star State, as it excels in beautiful parks, boulevards and surrounding scenery. This, with a semi-tropical climate, brings hundred of tourists from the frozen North to San Antonio during the winter months, where recuperation from ill health is invariably assured.

From a commercial viewpoint, the city, though outclassed by Dallas and Houston, will in time be on a level with the others, from the fact of it being a railroad center, with increased yearly shipments. With the coming of that day when the plow of progress will cause the thousands of fertile acres surrounding the city to yield grain and fruit and herds of cattle graze on the more broken lands, San Antonio will come into her own.

During my short stay in the city no little interest was centered on the story that a deposit of oil was discovered eight miles south of the town. Excitement in some quarters ran high. Company after company soon formed, among which were the National, San Antonio, Citizens, Diana and a baker's dozen of others, all holding interests in the field and all vieing with each other in getting men of means to help out in uncovering the precious fluid.

Accepting an invitation from the officials of the Diana Company, I visited the field. Though not so favorably impressed as those who had money tied up in the venture, including those who were trying to dispose of stock, it really looked as if there might be a nice pool some where in the vicinity.

At the time of my visit four wells were flowing. That is, they were making a good stagger at doing so, but, like Mike, who was vainly trying to get rid of an over-dose of corn juice, said: "Doctor, if ye give me somethin' to help we throw up, I could do a better job."

Anyway the field had enough of the ear-marks to bring operators from south Texas and Oklahoma, and for a time the cactus-covered elevation on which were located the spouters was the center of attraction. In no time, as it were, the plateau took on the apearance of a full-fledged oil town. The oil was so low in gravity that, in boiling out over the casing, it reminded one of meat coming from a sausage grinder.

Operators are basing their hope on a more prolific sand being found at a lower depth. We sincerely hope this will prove true.

With a Dog's Fidelity.

By Frederick M. Riegraf.

Author of "A Half Barrel," "A Morning Swim," and Gustav Groarti."

ELWOOD Hitzel answered the knock at his door and to his amazement a young woman dressed in deep mourning pushed by him and entered the room.

Hitzel, in his adventurous career as a detective, was used to many strange things; so now he coldly looked the woman over, but carefully keeping on his guard.

"Mr. Hitzel, you once told me that if I ever needed help to come to you," and she threw back her veil.

"Mary Olikon," he gasped in surprise, recognizing the daughter of a man who had befriended him in the past.

"I learned by accident that you were in this city," she continued, "and at police headquarters they told me where you were stopping."

"I have been chasing a rogue all over the States, but caught him at last. I intended to return to Savannah tomorrow, but if I can help you in any manner, tell me how."

The woman did not answer at once, but large tears rolled down her cheeks. Finally he saw her make a strong effort to regain her composure, and she said in a trembling voice:

"I have just lost one dearer than my own life."

"Husband?"

"No; but we were to be married next month."

"What was the cause of his death?"

"No one seems to know."

"Was it sudden?"

"No."

"What did the doctor say?"

"We had four; but they all seemed puzzled, and although they tried everything, he still kept sinking—sinking—until—." Her voice died away in a floor of tears. Hitzel left her have the cry out, then said:

"Do they attribute his death to foul play?"

"No; no one does. It just flashed across my mind yesterday, when I heard you were in the city."

"Please start at the beginning and tell me all you can."

"It was a little over four months ago that William Doyle asked me to be his wife, and I accepted. Then he was hale and hearty—as fine a young man of twenty-six as you would care to look at—without the least sign of ill-health.

"It was some four or five weeks later he began to complain of feeling tired and drowsy, and another month passed before he gave up and took to his bed, never"—she swallowed something big—"never to rise again. He was an orphan, so at the suggestion of a trusted

servant, we brought him to my house, where he had all the attention and skill that money could get. The same colored servant attended him the few hours at night that I snatched a little sleep. Still he sank lower and lower, until—he—"

She broke off again and Hitzel waited patiently until the spell of grief had passed before he spoke.

"Give me the names and addresses of the doctors," and he wrote them down on a slip of paper. "Do you suspect anyone?"

"No. He always had led a clean life and did not have an enemy in the world."

"What makes you think he was murdered?"

"I do not know—I cannot tell. But I feel like something had happened to him that could have been prevented if we had only known how, or where to look for it."

"You say no one attended him but you and this servant?"

"We had a nurse, but either George or I was always with him."

"What is his full name?"

"George Mortimer; he is a negro and from the south."

With a few more questions, Hitzel told the woman to go home while he called on the doctors; promising to call as soon as he had finished. Then he started off on what he thought was a hopeless case, or only a woman's fancy, but which was to prove one of the strangest cases he had ever tackled.

The doctors all gave him the same information; that William Doyle had died from a strange disease that they had tried vainly to fathom; but they were all of the opinion that while they did not know what had caused his death, there was not the least suspicion of foul play attached to the case.

So it was with a feeling of pity that he called at the home of Miss Olikon.

"The doctors say there was hardly a chance of foul play," he began.

"And you?" her eyes devouring his face.

"I am still neutral, and looking for evidence. But the doctors' statements weigh heavily in the favor of a natural death."

"I do not believe it," cried the woman. "A well, healthy man like William Doyle never would die the way he did naturally."

"I did not say that I had taken the doctors' verdict as final; but I am still searching for a clue to begin on."

Then, with a set face, he paced the floor for a long time. The woman seeing that he was buried in deep thought, watched his every move and expression closely, silently.

"You said this colored servant suggested that you bring Doyle here?"

"Yes."

"Call him here. Wait a minute," as she rose quickly, "I want you to prepare yourself for a surprise; I am going to accuse this man of murdering your lover!"

"Do you think th—?"

"No, I honestly do not think he had anything to do with it, but by frightening a person, especially a negro; by accusing them with the crime, they will not only tell all they know, but very often things they do not know. That is things they only suspect and would never think of otherwise. It is the best stimulant to the memory I ever tried."

"It is only a ruse then?"

"Yes; I am fishing for something to start on."

The servant was summoned, and Hitzel was a little surprised to see

such a well-built colored man. H was very light, almost white, and looked as strong as an ox. While the detective could see that he hau a bright and intelligent brain, far above any negro he had ever met before.

The man entered and, throwing back his massive shoulders, stood silently waiting orders.

"My man," began Hitzel, admiring the fine physic of the colored man, "Why did you kill William Doyle?" and he pulled back his coat, displaying his silver badge.

The negro gave a start and seemed to be badly frightened as he glanced quickly around the room.

"You cannot escape; I have men on the outside," lied Hitzel, little dreaming of what really was going through the other's brain.

"I was not looking for a way to escape," spoke the servant, in a deep voice, with only a slight dialect of the black race to it. "I am a little bit scared to be charged with such a thing as murder. I was only looking around for the water-cooler. May I get a drink to soothe my nerves?" "Yes."

The man walked slowly over to the other end of the room and poured out a glass full of water. Looking at the others a moment, he suddenly pulled a small bottle from his pocket and emptied the contents into the water; all his slowness had now disappeared.

Hitzel, on seeing him draw the object from his pocket and put it into the glass of water, sprang towards him, but with another swift move the negro raised the glass to his lips, and with one huge swallow he drained it.

"Do you want a drink?" the servant asked, holding the glass towards Hitzel, with a tantalizing smile on his face.

"What did you put in that water?" demanded Hitzel.

"Something that will put me beyond the reach of your charge before very long."

"You have poisoned yourself?"

"What are you going to do?" suddenly rang out the negro's heavy voice, as Hitzel started towards a telephone.

Something in the other's tone made the detective turn, and he found himself looking down the barrel of a revolver.

"I don't want to kill you, but you must not send for a doctor and his stomach-pump. I will not allow it."

Hitzel realized that if the man had really taken poison, he would not hesitate to shoot, having nothing to fear from the law, as he would soon be beyond its reach.

"Now, I have a story to tell. My time is short, so you must listen."

Then coolly drawing a chair to where he could watch both the man and woman, he sat down, taking care to hold his revolver in readiness; then he began:

"I was born in the South. My parents were at one time slaves, before I was born. But, having a good master, they stayed with him all their lives, just as if they had never been freed. I also lived with him in the same manner.

"My master had a boy about three years younger than me. 'Little Eddie' we called him.

"One day when he was about four years old, he was out playing, when I happened to pass near him and he asked me to play with him. That was the start. After that I was with him almost always. I used to get his playthings for him, and put them away after he was through with them. When he got tired, I used to carry him on my

back; when he slept, I slept on a cot in the same room, ready to get up at any time of the night to wait on him, should he awake. When he studied, I studied with him, and how he would laugh when his bright brain would beat me in the lessons; then after the teachers would leave his house, he would make me work until I got them right. I got an excellent education in this manner.

"I was his willing slave; for I loved that sweet litte boy better than anything else I ever had or knew. He never was very strong, but always good and kind. It did not matter how low or dirty the person was, or what color they were, he always had a smile and a word of kindness for them. Everybody who knew this lad loved him.

"It was when he was eighteen that a family came from the north and took a cottage for the winter, near our plantation.

"They had a daughter about four years older than 'Little Eddie,' who was as beautiful as a mountain rose. I soon had many trips with my little master over to this cottage. I would mind the horses while they rambled through the woods or over a hill.

"I soon saw that my master was deeply in love, and I was pleased, although my heart felt a little heavy as I realized that I would not be in his company very much when he married. I thought the girl loved him, too until a friend of her's came on a visit.

"One day my master and I were walking through the woods on our way to the cottage, when we heard voices, and recognized 'her' voice. Something made us pause a moment—then we stood as if made of stone, as we heard the girl of Eddie's heart tell her friend the fun she was having, flirting with the boy from the plantation.

"For the first time in my life I felt murder in my soul. I could have rushed out and torn that fickle heart from its pretty bosom right there and then. But I had my hands full, for my master fell to the ground in a dead faint. Tenderly I carried his little form in my strong arms back to our home.

"When he came to, he would not give up hope, but insisted on going to see the girl that night.

"He went, and he proposed; but she laughed at him and made fun of him."

The darkey paused and looked at first one and then the other, as if to impress the facts on their minds, then he continued:

"This broke that tender little heart. He soon started drinking, and everything bad he could find to do he would. We all tried our best to stop him. His mother and father were soon bent with sorrow. While I was now left at home when he went out.

"His weak body could not stand this wild life long, and in less than a year saw a sad funeral from that once happy home.

"Our dear 'Little Eddie' was no more."

Here the man burst out sobbing like a child, his whole body shaking violently, showing how dearly he had loved this little white youth Finally he pulled himself together and began again:

"Once an old negro women died who had been brough from some wild island to this country in slavery. I was always a favorite with this friendless negress, so just before she died she gave me a small bottle of dark brown liquid. She told me that one drop a day of that

stuff would make a person gradually waste away and that no doctor could tell what ailed the patient, and that it left no trace afterward. Ten drops of this liquid would kill anyone in about four hours.

"After my master's death I came north with my little brown bottle. I succeeded in getting work in Miss Olikon's house. I was so faithful that I was soon trusted with everything.

"When I found out of her engagement with Doyle, I would put one drop of the liquid in anything that I happened to serve to him when he was calling at the house. After he was brought here sick it was easy for me to keep it up—one drop every night in something that I gave him.

"And I just put ten drops in that glass of water I drank !"

The man paused and smiled at the detective. As he seemed to have finished, Hitzel asked:

"By why did you kill Doyle ? What had he to do with your master's love affair and death ?"

The smile left the negro's face and he sprang to his feet, trembling with passion and rage, as he cried out :

"Doyle had nothing to do with it. I was forced to take an innocent life in order to strike where I wanted to. Cannot you see who that woman was who killed my master just for a little fun ? There she sits !" and he pointed to the woman beside him, whose blue lips and dark eyes were the only semblance of color on her ashen face. "I stole her love as she stole the little southern lad's. I have killed her lover because she killed Edward Daniels.

"You," he fairly shrieked, as he pointed his finger in Mary Olikon's face, "have two murders at your door—that of the little lad down south, and now your lover, for you are the cause of them both ! Think of them both as you go from place to place in your waking hours; think of them as you sleep; and now and then just try to remember that I make the third that would still be alive but for your little fun down on the plantation."

With a hoarse laugh he sank back into a chair and, true to his word, four hours later found him —who, with a dog's fidelity, had sought out the woman and revenged his master—a corpse on his way to join that beloved little lad.

Mary Olikon lost her mind, and now is one of the most violent inmates of a private asylum.

PARANITE "C" GASKETS DO THE WORK.

Previous to 1911 all the Natural Gas Transportation Companies were experiencing very costly troubles with defective joints in their pipe lines, caused by the gasoline condensate eating away the ordinary rubber and asbestos gaskets used up to that time, by all the Coupler Companies. To Mr. John G. Pew and Mr. H. C. Reeser, of the Peoples Natural Gas Co. and the Ohio Fuel Supply Co., and R. A. McKinney, of the Manhattan Rubber Mfg. Co., belong the credit of developing the Paranite "C" gasket, which has remedied all these troubles and saved all companies who have adopted them much money and trouble, as up to the present time there has not been one single failure of Paranite "C" gaskets, and they are now in use in over 2,000 miles of lines of various sizes from 1 inch up to 20 inches.

THE WALKING BEAM.

(By Sandy)

Published in the Interest of Posey Co.

This paper is a member of the International Hand-press. $1 per year.

VOL. NO. 1. MOTTO—Brutum Fulimen. ISSUE NO. 3

In this issue of The Walking Beam we run the picture of Uncle Billy Johnson, whom we have engaged at a heavy expense to contribute items on oil an' other topics, which includes some original poems of his own eminatin'. We are personally acquainted with this widely known oil criterion and newspaper writer and we pride ourselves in bein' able to obtain him. We work on the principal that there is nothing too good fer our readers. Uncle Billy used to drill salt wells around Pittsburgh somewhere an' his fund of information on matters pertainin' to oil is similar to our own somewhat.

OIL NOTES.

(By Uncle Billy.)

Not since the first well was drilled in the Crab Creek territory has there bin as much interest manifested in the outlook fer a resumtion of work as at the present time. Yes, the boom is on, an' anyone who hez valuable oil property to lease will hev no trouble to dispose of it. This is inside information given the writer by one who stands close to the president of the Cross Roads Company, in strict confidence. In fact, frum this on, the only reliable oil news you can depend on will be found in the colums of The Walking Beam; arrangements hev been made fer the same.

Work hez bin delayed somewhat by high water, caused by both

spring runs frum Abe Zimmerman's an' Ezra Koonce's springs overflowin' their banks an' inundatin' the producin' territory to the depth of several inches or more. With the runnin' off of the surplus water, we hev every reason to believe there will be considerable work, if not more goin' on.

A report was in circulation yesterday that the Standard Oil Company hed made a offer of several dollars fer the producin' territory, but a couple hours interview with the heads of the differunt companies lead us to nail the report as a vile fabrication. In fact, to the best of our knowledge and belief, we doubt if the Standard would ever think of buyin' the field without consultin' the managers and owners of The Walking Beam. The very idea of a deal like this bein' consumated without us knowin' it. Our readers can rest assured that if you read it in The Walking Beam, it's true. We did hope to chronicle something doin' in the field in this issue, but were disappointed on bein' unable to find out any. Watch our bill board an' keep posted.

It's Trump When You Are Old.

(By Uncle Billy.)

The well is dry, that good old well
I struck in days of yore.
For more than twenty years it kept
The wolf frum round my door.

Before I struck the amber fluid,
(I remember well the time)
I wore my daddy's cast-off clothes
And never had a dime.

The girls would pass me on the road
And say, "There goes poor Jones;
He'll never set the world on fire;
He's here to pick the bones.

But when I struck the pebbly rock,
And the news did flash around,
I could have had my pick of all
The pretty girls in town.

For twenty years I cut a swath,
And when the well did fail,
My friends had carried off the hide,
And left poor Jones the tail.

(Moral.)

If you should drill a flowing well,
Or strike a mine of gold,
Remember that a bank account
Is trump when you are old.

On another page will be found a true likeness of our associate editor, Uncle Billy Johnson. The photograph of this well known journalist was taken last week by a local photographer an' depicts Uncle Billy in a favorite pose of hissen when enlightenin' fellers on subjects relatin' to modern an' ancient oil history.

Uncle Billy was born in Cattaraugus county, New York state, but on what date we hev been unable to find out, but the Injuns were quite plentiful at that time, so he says. We hope that the readers of The Walking Beam will appreciate the trouble an' expense we've gone to in gittin' him on the paper, havin' to put up a bonus, as the Briarville Breeze wuz after him, too.

As takin' Uncle Billy into our employ hez created a leakage in money till, we cordially invite all them who are in arrears to pay up. If you don't, how do you expect us to pay Uncle Billy? This oughter be a warnin' fer them as owes us. That Uncle Billy is popular lies in the fact that at the dog show held at the county seat he was unanimously appointed biscuit inspekter, which is plainly evident he hez sum braines.

Picked Up On the Sidewalk.

Cal Titsler, whoes bin helpin' to lay pipes fer runnin' oil through in Wes' Virvigina fer a year or so, come home to see his folks an' got full of whiskey an' sassed our town constable in Cy Jones' store, who had him arrested an' brought afore Squire Hicks, who axed Cal what reason he could give fer gitten full. Cal said that he'd a thousand reasons fer not gittin' full, but when offered a drink he fergot every dadburned one o' them.

Phebe Spence, whom we spoke of in our last issue as celebratin' her 5th birthday, sent us the follerin' fer publication an' said it wuz original. Here is what she says:

"Aren't we young girls fools. The older I grow, the more I realize it, but then it is your own experience that counts and nobody else can tell you anything.

Samuel J. Buzzard, who hez been defeated 11 times fer pathmaster, hez purchased a couple of acres of ground in Dogwood swamp and will engage in raisin' frogs an' turtles fer the spring an' summer trade. Samuel says that he'd stay in Mink City an' run fer street commissioner, but the voters are to dummed ignorent to recognige his worth.

Sol Skinner, our town constable an' detective, dropped into Cy Jones' store tother evenin' an' said that if business didn't pick up better in his line he'd be compelled to engage in suthin' more sustainable, which speaks well fer Mink City as a desirable livin' place, which is owin' to The Walkin' Beam settin' its feet down on evil doers.

Sis Mong, Hiram Mong's girl, whom we hev spoken of several times in The Walking Beam, was in town the latter part of this week an' called on Phebe Greenfield fer a couple of hours. Sis looks quite pert an' said she hed stood the winter fairly well, considerin' she'd been under the weather most of the time.

A firm engaged in the liquor sellin' trade down in Kentucky sent us money fer runnin' the follerin' in this issue, but we declined on the ground that we are opposed to publishin' whiskey ads in The Walking Beam. The idea of runnin' an ad like this, "4 full quarts o' pure rye whiskey fer $3.00 an' a bottle o' wine too, an' signed Wolf Run Distilling Co., Bagtown, Ky. We need money mighty bad, havin' but one shirt to our name, but no dadburned whiskey makin' shebang is goin' to git us to advertise their compounds.

Ez Ketchem sez that the feller who said that the human race is composed of one bunch of hypocrites tryin' to fool another bunch of dissimulators, had one eye on facts anyway. Ez may be right, but it's not always the best to tell all you think.

All news and ads printed here will be charged fer at a nominal figer per line. We will not deviate from this rule under any circumstances.

For Trade.

Would like to trade by interest in a White Mule emporium in Cushing fer an interest in an oil lease. I hev cleared up considerable money in the business, but bein' of a nervous temperament, I am compelled to dispose of my interest fer various reasons. There hez been a noticeable increase in trade among our merchants since I opened up my White Mule place. Fer instance, there's Sam Knuckles, whoes been bathin' on an oil

"NO TOBAC"

An Oil Country Story In Which A Plot Fails to Work.

THE scene opens in an oil country boarding house in Sandusky, Ohio. Between two cots in an upper room is a table. On either side, seated on stools, two men are dealing cards from a pack alternately. But what would excite the interest of an on-looker is that the cards were being dealt in three piles, no third person being present.

The men were Billy Kennedy, now a well-known optician of Franklin, Pa., and Harry Bliss, pumpers on a lease, of which Chas. Reed, now of Wirt, Oklahoma, was field foreman.

Though Reed was not considered an expert in handling the pasteboards in a game of draw poker, he knew enough about the art to relieve Kennedy and Bliss of what change was left after settling their board and laundry bill. This was a thorn in the flesh of the boys, and they finally decided to pool their issues. In other words, they would form a partnership, practice stacking the cards until they would be able to deal Reed any kind of a hand they wished. So night after night found the two conspirators manipulating the cards, until, as Kennedy said, "we could beat Charlie too easy. In fact we would laugh and shake hands over the money we won off of him, when he was not around." One evening, when they were having unusually good luck in dealing the absent Reed poor hands, who entered the room but that worthy, who said:

"Boys, it's early yet; how about having a game of draw poker?"

Nothing could have pleased the boys more, and no time was lost in getting ready to relieve Reed of his monthly salary.

A few days prior to the eventful date, Kennedy, who was addicted to the use of tobacco, and anxious to be cured of the habit, purchased five dollars worth of "No-tobac," and, not having the regulation chips, the pellets were used to represent the same.

Cove oysters, pickled hogs' feet, and tickets to the opera arose before the boys' visions as they settled down to relieve Reed of his government stamp commodity, but somehow they could not properly connect, for, as the minutes flew by, the pile of "No-tobac" grew larger on Reed's side of the table, and, inspite of their combined knowledge of card stacking, they witnessed the last pellet go to join the others.

Silence followed the final hand for a few moments, when Reed, shoving the pellets towards Kennedy, said:

"Hell, if you are all through, I'll take the cash and go home. Pull out that old wallet of yours, Bill."

"Charlie," said Kennedy, "if oil

derricks were selling for fifty cents apiece, I couldn't buy a headache post."

"What bout you, Bliss?"

"Honestly, Reed," replied Bliss "if steam engines were going at thirty cents, I couldn't buy an oil cup."

"Oh, well, if that's the state of affairs," said Reed, as he arose from his chair, "I'll try the quit-tobacco stunt myself," and, transferring the "No-tobac" from the table to an overcoat pocket, he, with a "Good-night and pleasant dreams," left the chagrined would-be gamblers meditating over their ill luck.

The Believers and Knockers.

Two Classes of Oil Men Developed By the Doings of the McBride Well in Butler County During 1905.

THE following article is taken from The Butler (Pa.) Eagle of May 20, 1905, and shows that theory doesn't always work out in the oil business.

"The McBride well is responsible for two classes of producers in Butler county at present. The bigger class is inclined to accredit the well with all the oil it is making, while the other class attempts to belittle the production. The line between the two classes was never more strikingly manifested than it was on Thursday when the report that the well was down to six barrels an hour was being circulated.

The class which apparently delights in belittling the production took advantage of the report and circulated it persistently with a false spirit of regret. When more optimistic reports of the well were received and the six-barrel report gradually downed, there were still many of the street of Butler who insisted that the six-barrel report was the correct one and that it was to be expected that the bottom would drop out of the well.

"The pessimists based their opinions, which were unduly vaunted, on the untenable theory that Butler county's days as a producer of big wells is at an end. It is a theory that has been passed from lip to lip for twenty years, and there is always to be found a class that takes particular pleasure in propgating it. The McBride well has been doing its work under this prejudice, and from the time it was struck there were many who were loud in their declarations, that what really was could not be. It took them several days to realize that the well was spouting oil at a one-thousand-barrel-a-day rate.

"There is such a thing as conservatism in the oil business, but advancing the opinion that Butler county is drilled out, is exercising the most reckless form of pessimism. The flow of the McBride well is daily demonstrating that the county has not been drilled out.

"Twenty years ago a dry hole in

a particular section almost condemned the entire township, but the tendency improved until a dry hole merely signified that a particular section was barren of the yellow fluid. Now it is that a dry hole will not condemn the adjoining farm. The later day developments manifest that the biggest kind of producers may be brought in on land that has been condemned for years.

"As an instance, take the present strike. Hundreds of oil men have passed the Waldron farm and cast a scanning eye towards it, always with the impression that it would not yield oil in paying quantities. The land has been lying open for years and could have been drilled, as it was drilled, without the payment of anything for the privilege of drilling it.

"Three weeks ago the question, 'Is that an oil-producing land?' could have been propounded to 90 per cent. of the oil men about Butler or any other town, and the answer would have been: "It has been drilled on all sides, and there is nothing there that would justify the sinking of a well." The accuracy of this statement can be determined by recalling the troubles that McBride encountered when he was attempting to finance the convictions. He approached the best-posted men in town, but they were satisfied there was nothing there—theory was against it; the country had been tested—and no one cared to risk a dollar in the venture.

"It may be said here that it was the sublime confidence of the tenderfoot that made the well a possibility. The argument that failed to appeal to the wise ones looked good to him and he took a chance. All this proves that theory is worth nothing in the oil business. If the business was one of theory, the men who make the maps, who study the sands, who know the histories of every field ever struck, who know the geographical relations of all the pools that have been discovered, who have followed the different fields for years, would be the persons to consult, for they have reduced the theories to a science; but this class unfortunately cuts little ice in the way of active production, and its members, while they are accredited with having a wide knowledge, don't get much more than "Dry Hole" before their name.

"There is no oil man, young or old, who does not drift to theory sooner or later, and they will tell you, with all due earnestness, the result of their deductions upon lines, sands and pools; but there is not one, unless favored by fickle fortune, who can demonstrate his theory, and a theory is never any good until it is demonstrated.

"Many a man will tell you there must be oil at a certain point, for there is a producer here, and one there, and so on; but the busy drill ever since it was made shows that these same 'musts' are only good on the surface.

"The location of a pool of oil, or whatever you choose to call it, is a game of chance, and not one of science. It only takes a few hundred acres of land to make a big oil field in this county, and until each and every one of these several hundred acres are drilled, Butler county will not have seen the end to her oil development.

"After the drill has driven its way through all our land in this county, we will then know that the end has been reached, but until the theorists who have condemned this county have the advantage of the

looking-backwards proposition, will they be in a position to prove that the county has seen its last of new developments.

"The McBride well gives the optimist his inning, and the way the drill is now being driven indicates that there are many who are satisfied that the county can still produce big wells.

"If a man in a suit of driller's clothes inveigles you into investing in a drilling venture, and you go in, sublimely conscious of the ten thousand phases of the industry, and then afterwards learn from the wise, thoroughly experienced theorists that fifteen to one hundred dry holes have been drilled within a mile of the hole in which you have placed your money and hope, do not be discouraged. Just rest your faith in that fickle goddess who places men in the automobile class, and go along happily, remembering that the wise ones have too much knowledge for their own good."

WARNS GASOLINE USERS.

From Oklahoma comes a warning to automobile owners and motorists of the danger of using a chamois skin as a strainer for gasoline. Ross Brooks, chief of the Oklahoma City fire department, says not one motorist in a dozen knows that he is literally taking his life in his hands when he pours his gasoline through a funnel in which he has placed a chamois skin to act as a strainer. Statistics of the fire departments of many large cities show that a large percentage of auto fires are caused by this simple practice.

"Static electricity," explains the chief, "is formed by the friction of the gasoline passing through the chamois, which a careless motion may generate into a spark, causing a frightful explosion, which has several times occurred in the midst of a party of motorists, and the cause of which has until recently remained a mystery.

"So long as the funnel fits tightly into the mouth of the tank there is no danger. But when the funnel is held in the hand or is separated from the conductor (in this case the metal tank) it becomes charged with one of the most powerful and deadly agents in the world—electricity. In many cases the motorist goes on his way, not knowing that he brushes elbows with death. For unless a ground is formed as the gasoline filters through the chamois, a spark will inevitably leap from the funnel to the nearest point of contact with the tank.

"Many persons have been burned and scarred for life, and several have been killed, through ignorance of this electrical phenomenon. Formerly somebody was supposed to have inadvertently struck a match when these sudden explosions occurred, but now investigation shows that the true reason is due to the fatal oversight of using the chamois skin in a suspended funnel.

"The moral of the whole thing is: never, under any circumstances, put gasoline through a chamois skin. The danger always exists, for electricity is a peculiar agent, and it is an impossibility to know when the funnel being used so innocently by the ignorant motorist has received its maximum capacity of the statical current."

RITTMAN GASOLINE PROCESS.

The United States Bureau of Mines has just issued a thoroughly complete report on the so-called Rittman process of cracking petroleum for gasoline and the production of benzol, toluol, etc. The document in its entirety consists of 250 pages of compact analytical descriptions accompanied by elaborate tables, diagrams, etc., covering not only the laboratory processes and experiments as carried on by Dr. Rittman, but also describes the plants as needed, included that established by the Aetna Explosives Co. at Pittsburgh. The work was written by Dr. W. F. Rittman, in collaboration with C. B. Dutton and E. W. Dean, of the Bureau.

This document cannot help but be of interest to the oil trade, and particularly to those who are studying the various processes for obtaining increased outputs of gasoline. The document is issued free of charge by the Bureau, and is known as Bulletin 114, Petroleum Technology, Series 29, under the title of Manufacture of Gasoline and Benzine-Toluene from Petroleum and other Hydro-carbons.

The first part is devoted to the principles and methods involved, as well as a historical review of patented cracking processes, as well as discussion on aromatic hydrocarbons, together with industrial uses, and points out the possibilities of developing an industry on products needed in the manufacture of dyestuffs. A large section is given large-scale developments of the benzene-toluene processes.

In the introductory preface it is pointed out that there are two wastes or losses connected with the petroleum industry. One is the loss connected with production, which leaves unrecoverable oil in the ground estimated at 50 per cent., and the other inefficient utilization in the refining end. On the latter, the statement follows :

"Losses in utilization include not only the actual waste in the use of petroleum and its products, but the making of excessive amounts of less desirable products in manufacturing the products that are in most demand. For instance, gasoline is obtained chiefly from petroleum containing a large proportion of paraffine hydrocarbons, but many of these petroleums yield only small percentages of gasoline under the old distillation methods, so that their utilization in this way has been uneconomical and wasteful. By 'cracking' processes the yield of gasoline by the Burton process, the cracking process used by Standard Oil companies, amount to 3,000,000 barrels in 1915, but this was equivalent to 18,000,000 barrels of mid-continent crude oil; in other words, only about one-sixth of the bulk of an average paraffine-base petroleum from the mid-continent field was converted into gasoline by the cracking process most in commercial use in 1915.

"A fact frequently forgotten is that, in spite of the enormous production of petroleum in this country, approximately 65 per cent. of the world's output, our petroleum deposits are of limited extent as compared with the deposits of coal. The restricted area of prospective oil lands limits the possible number of new fields, and makes imperative both the best use of our present known supply and the curtailing of unnecessary extravagance

and of waste in the use of petroleum products. The use of oil as a fuel, when less economically valuable, but equally availiable fuels, such as coals, are at hand, cannot be too strongly condemned. We are constantly acquiring knowledge of the nature of the constituents of petroleum and of the possibility of converting these constituents into much wanted and valuable products adapted to higher forms of industrial use.

"This bulletin deals with the cracking of petroleum and other hydrocarbons and the production thereby of gasoline, benzene and toluene. The authors give a comprehensive review of the literature and present in much detail the results of the experiment made by Dr. W. F. Rittmann, now chemical engineer of the Bureau of Mines, in the development of improved processes for manufacturing gasoline and benzene-toluene, and present some of the results achieved in working out the benzene-toluene process on a commercial scale.

"Applications for patents on both processes have been filed with the intent of having the processes dedicated to the public, and the patents assigned to the Secretary of the Interior as trustee for the people of the United States. On February 1, 1916, seven refineries, in six States, were installing plants for the gasoline process. Benzene and toluene were being produced in large quantities by the other processes."

NEW PUBLICATION OF THE
WEST VIRGINIA GEOLOGICAL SURVEY

There has just been published one of the most important volumes ever issued by the West Virginia Geological Survey, Morgantown, W. Va. This publication is described in the following extract from the printed circular of the Geological Survey, and the reader is also told how to secure the publication in question:

(23) Detailed Report on Wyoming and McDowell Counties, by Ray V. Hennen, isued under date of December 31, 1915, containing 783 pages +XXVII of introductory matter, and illustrated with 32 half tone plates and 28 figures or zinc etchings in the text. The soil map and report on the area will be issued separately a few months later. This Detailed County Report covers one of the principal areas of the great Pocahontas or "Smokeless" coal fields of West Virginia, giving a complete account of each coal bed, with analyses, estimates of unmined tonnage, and Topographic and Structural Maps showing elevation, dip and strike of the principal coal beds, including the famous No. 3 Pocahontas, covering the counties of Wyoming and McDowell, the latter leading every other county of West Virginia in the production of coal of the highest grade by several million tons annually. Price, with case of maps delivery charges paid by the Survey, $2.50, but for combination price with other publications, see general circular of publications. Extra copies of geologic map, $1.00 each, and of the topographic map, 50 cents each. West Virginia Geological Survey, P. O. Box 848, Morgantown, W. Va.

THE OIL MARKET.

SINCE the publication of our last Magazine, oil of the Pennsylvania Grade has advanced in price from $2.35 to $2.60 and as oil of all the different grades have advanced in a similar ratio the situation in the different districts of the oil producing areas is vastly different from what it was three months ago.

The wildcatter is busy everywhere; new wells are starting up on the edges of the old pools in the effort to extend them or far from any known producing area in an attempt to discover a new pool. Supply houses are taxed to the utmost to supply the trade in supplies of all kinds. Machine shops are busy, operating to their limits and renewed activity is visible everywhere.

Prospects were never brighter for a busy season in the oil region.

It is true that the activity for the moment consists principally in preparation for active work as the roads in the different fields are in such a deplorable condition that stuff cannot be moved to the leases.

There is a dearth of prospective producing areas in some of the older pools but with oil at $2.60 and with a reasonable prospect of a still further advance, maps are being gone over carefully in the hope that some available spot may have been overlooked or that some untested nook may look different now from what it did a few years ago.

That the producer expects higher prices for his oil in the near future is evidenced by the fact that the credit balances are being held, particularly in the Eastern fields; producers preferring to pay storage on their oil to selling it even at the present prices.

They figure that the gusher pools of high grade oils are all exhausted —that no large fields are likely to be opened up in the East—that it would take an innumerable number of small wells to cause an overproduction—that the demand for Pennsylvania Grade oil is constantly increasing—that with all the drilling that is being done the production is constantly decreasing, therefore higher prices must come.

West Virginia and Southeastern Ohio fields show an increase already in completions though the weather conditions for March were very unfavorable for field work. The Preston Oil Co.'s No. 6, Eliza Stiers farm which was drilled through the Clinton sand at a depth of 3,190 feet started off at a 75 barrel gait. Though the northern end of this field does not show the regularity in the strata of some other portions it will be given a thorough test the coming summer. All through Western Pennsylvania, Eastern Ohio and West Virginia nothing prevents the bouncing the drill as has not been done for years but the question of better roads.

On account of weather conditions in these different localities the roads have been deeper and less passable than they have been for years.

Happily the question of better roads is one of the vital burning questions of the day, especially in

West Virginia where they expect to spend several millions of dollars the coming summer for the betterment of the roads and in Pennsylvania where the agitation has been kept up for several years but has not as yet taken a concrete form.

Operations in the old districts of Butler County, Pennsylvania, show an increase of one hundred per cent. in the number of completed wells, with a corresponding increase in the production, though the producing wells are so small that they affect the sum total but very little.

The Johnson well on the Brewster farm, near Alameda Park, Butler County, Pa., which at first was thought to be a big producer, and might open up a new pool, proved to be a fizzle and was plugged. When this well was drilled through the hundred foot sand there was a strong showing due to a gas pocket as well as a heavy flow of salt water. Residents of that section were surprised at the showing and more than one Butler leaser dropped other business to jump into the promised new field to secure some territory, as the reports from the well were of the rosiest.

After the well had been drilled through the lower pay sand it was tested by bailing and declared to be a failure.

The McKean County, Pa., pools made a rather poor showing in March as to completed wells but as there was quite an increase in the number of rigs the future looks bright for greater activity during the summer.

Very little production seems to be changing hands at present owing to the high prices asked, which might be considered another argument in favor of what seems to be a general belief that oil will still go higher. No production is offered for less than $2,000 per barrel and in some places $3,000 is asked, it all depends on the sand in which the oil is found and the staying qualities as well as the age of the wells. Even the location of the well is often used as an argument to enhance the price. Many producers are inclined to let well enough alone and knowing they have a good thing prefer to hold on to it.

Apropos of the great demand for gasoline at present, which is one of the important constituents of crude oil, it is pointed out that there are immense beds of shale through the central part of Eastern New York that are capable of producing untold quantities of gasoline. It was thought at one time by geologists that the great deposits of oil in Northwestern Pennsylvania came from these same shale beds. Prof. Winchell in a letter to the writer of this article, written a good many years ago said that: "A church in the city of Old Chicago built of shale was so impregnated with crude oil that when the sun shone brightly against its sides, the crude oil could be seen dripping from it."

There is a company in active operation today in Scotland and has been for 50 years, that is making illuminating oil from similar shale beds and while they may never be able to affect the crude market in the United States, they have continued to make this oil at a profit to themselves through all the vicissitudes and ranges in prices of our markets.

At Portage, Wyoming County, New York, where these great shale beds are exposed, it is said to be possible to dig a hole in the shale into which a small amount of petroleum will drip. It would not

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take a great stretch of imagination to foresee a time in the future when a process will be discovered to manufacture gasoline from these beds at a profit, just as mountains of low grade ores in Alaska, containing gold are worked today at an immense profit to the companies operating them.

The different pools in Kentucky are showing renewed activity although the month of March this year was very unfavorable for operating on account of the very bad condition of the roads. The runs from the different pools of Kentucky for the last week in March as compared with those of the last week in January this year show a daily increase of 877 barrels which was distributed as follows:

District—	Barrels
Busseyville	1,144.12
Cooper	1,185.89
Denny	1,063.09
Steubenville	1,299.95
Lewis	810.98
Irvine	4,391.40
Page Hollow	433.95
Stillwater	263.61
Beaver Creek	65.20
Ragland	982.32
Parmleyville	931.07
Williamsburg	148.77
Total	12,720.17
Daily average	1,811.17

Most active at the present is the Irvine pool in Estill county which produces one-third of all the oil produced in Kentucky and operations in this section will be pushed to the limit the coming summer.

Another pool in Kentucky which is attracting a good deal of attention just now, is the Scottsville pool in Allen county, where the wells that are already completed show good staying qualities and as a result prices as high as $20.00 an acre for leases and one-eighth royalty have been paid. For the oil man who is willing to take the chances, and operating for oil has always been considered a good gamble, Kentucky presents as good a show as any State in the union today. For the man of small means it is especially attractive, as shallow territory can be found where it costs but little to operate compared with some of the deeper sand pools.

Tennessee has not as yet proven a success as an oil producing State. There will be considerable prospecting in different portions of the State this season, though, and if oil exists there the persistent wildcatter will likely find it. Though holes have been drilled in Tennessee to a depth of 2,500 feet, nothing has been found that looked like an oil bearing strata below 1,400 feet. Most of the "signs" of either gas or oil being from gas pockets with a little trace of oil at depths varying from 200 feet to 500 feet in depth.

In Louisiana, in the Caddo, De Soto and Red River fields the production has increased but little since the first of the year and although operations have been fairly active yet the new wells have been scarcely able to keep up the decline of the old ones, the daily production averaging about 40,000 barrels. This production is divided among the fields as follows: De Soto and Red River 24,000 barrels; Caddo and Northwestern Texas 16,000 barrels. Late wildcat tests in Northwestern Texas in an attempt to extend the territory have been decided failures. At Lake Bristenau, some 12 miles southeast of Shreveport a great gas field has been opened up and it is thought that a good pool of oil will be discovered in this vicinity. A late well at Crichton owned by the Producers Oil Co., on the Brinker-

hoff is good for 1,000 barrels. There are several other wells drilling on this same lease with good indications of paying wells. In the Hart's Ferry district the Standard Oil Co. have three wells drilling on the Stiles lease. Near Oil City in the Black Bayou and Pine Island pools there are a number of wells drilling in the vicinity of good producing wells.

The different pools in the Gulf Coast region are producing daily about as follows:

District—	Barrels
Humble	47,385
Sour Lake	11,450
Vinton	9,000
Saratoga	2,500
Edgerly	5,445
Batson	1,875
Total	78,555

Humble producing, as usual, more than all the rest. A deep well is being drilled in this pool by Burt & Griffith on the Yeagley to test the lower stratas, which has reached a depth of nearly 5,000 feet. A little gas with a show of oil was found at 4,500 feet; the oil found at this depth had a parraffine base.

The wildcatter is unusually busy in the Texas Panhandle with pronounced success; most of the wells finished laterly having proven to be paying wells; as a result a great deal of new work is in evidence.

The high price of this oil has also had its influence in stimulating the action of the drill. The effort to connect up the Electra and Burkburnett pools has apparently been given up as a bad job and more effort is being given to extend the limits or defined area of the already established pools. The well of W. C. McBride on the Thom at Burkburnett is good for 100 barrels or better at the 1,800 foot level while the Magnolia Petroleum Company scored a 20 barrel pumper at a depth of 400 feet on the Halcomb.

The production of crude oil in the State of Oklahoma for the year 1915 amounted to 123,905,000 barrels. During the year 4,000,000 barrels of oil was placed in storage in the Healdton field, and on January 1, 1916, the amount in storage in the Cushing and other fields was 90,310,000 barrels, an increase in stocks over that of January 1, 1915, of 16,000,000 barrels, while nearly two million barrels were lost during the year by fire. In February, 1916, a well was struck in the Cushing field, near Drumright that was said to have had an initial production of 20,000 barrels per day, which after flowing for more than a month was still producing 9,000 barrels per day. The drilling of Bartlesville sand wells to the Tucker sand in the Cushing field had a marked influence in operations in Oklahoma. The first of March found 303 rigs up and 932 wells drilling in the State. In the Cushing field there were 71 drilling wells and 29 rigs. New production from the Tucker sand reached 30,000 barrels in a little over a month. Cushing is still furnishing some fairly good wells, the best of which is found in the Tucker sand.

It is still argued by some that the so-called Tucker sand is not a separate sand at all but is a continuation or thickening up of the Bartlesville sand. If this is true it is not entirely a new thing in the history of oil sands, as it has long been contended that the Third and Fourth sands of the Pennsylvania oil fields run together in the Great Belt section of Butler County, Pa. About five miles south of the Cushing pool is the Shamrock pool, the wells of which until lately have been found in the Layton sand,

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which is a much shallower sand; but in the Gipsy Oil Co.'s No. 2, Fields, a well has been drilled into the Bartlesville sand which is a good producer and a lower sand pool of generous dimensions is confidently looked for here by operators in this territory. Test wells which are being drilled between this well and the wells of the old Cushing pool will show conclusively within the next few weeks whether there is a connection between the two or not.

Operations in Butler County, Kansas, are at a very interesting stage just now as a number of test wells are nearing the interesting spot and the next month should show some completed wells that will either extend the producing territory or mark the oil map with a number of dry holes.

The deep sand in this vicinity is found at something less than 2,500 feet with a thickness of almost one hundred feet. The increase in the price of Kansas-Oklahoma oil has stimulated the operators to renewed efforts and it is certain that the boundaries of the old fields will be drilled over again with the hope of extension, while the wildcatter will spare no efforts to connect up all the known pools.

The total amount of oil produced in Oklahoma since 1901, by years, is as follows:

Year—	Barrels
1901	10,000
1902	37,000
1903	138,000
1904	1,366,000
1905	6,466,000
1906	18,030,000
1907	43,524,000
1908	45,598,000
1909	47,859,000
1910	52,028,000
1911	56,069,000
1912	51,427,000
1913	63,579,000
1914	98,000,000
Total	484,131,000

Total 484,131,000, which amount added to the amount produced in 1915, which was 123,905,000 barrels makes a grand total of 608,036,000 barrels. Oklahoma refineries have increased rapidly during the past year—their capacity having trebled—one-third of the production of all the Oklahoma fields being taken for refining purposes at home. Tulsa is expected to rank in the near future as the greatest refining center in the United States. As most of the refineries are allied with independent pipe lines, it is thought that the Standard interests contemplate the erection of a mammoth refinery to offset the activities of the independents, who are associated together as the Western Petroleum Refiners' Association. A premium of from ten to fifty cents a barrel is being offered by this association for oil of the Cushing grade, as this oil contains a greater percentage of gasoline than any other of the crude oils of Oklahoma. On account of the unprecedented demand for gasoline, especially for foreign use, it is freely predicted that gasoline will retail for 40 cents a gallon before the end of the coming summer.

Arkansas is rapidly coming to the front as a gas producing State; two gassers having been completed during the last month having a capacity of from fifteen to twenty million cubic feet per day each, and with 30 rigs and drilling wells under way the next thirty days should show some completions, which if successful, will make quite an addition to the known gas producing area.

California, which has been one of the greatest petroleum produc-

ing states of the union, seems to have its oil districts practically outlined and little seems to be expected at the present time in the way of the discovery of new fields. A number of the operators hold to the belief that a prolific producing sand will yet be found deeper down in the earth and steps are being taken to test the lower formations in the different oil districts of the State. Some prospecting is being done in the neighborhood of Ventura with no results as yet. The old shallow pools are very quiet with but little doing. Coalinga is fairly active with the wildcatter busy. A deep well is being drilled here by the American Petroleum Company, which has reached a depth of 4,600 feet without discovering anything new. The legal fight is still going on between the government and the Southern Pacific railroad in regard to the possession of disputed lands but the average oil man is not expected to be benefitted much whichever way it should be decided.

Operations in Illinois showed a decline at the close of the month of March over those of February, both in the number of rigs up and the number of drilling wells, though the completed wells showed quite an increase with an increase of new production of 1,300 barrels. The decline in new work is said to be entirely due to the deplorable condition of the roads over which it was simply impossible to do heavy hauling.

While the shallow sands are producing small wells as a rule both the Biehl sand which is found at a depth of about 1,600 feet and the Kirkwood sand at 1,700 feet are furnishing some good paying wells. The western part of the State is still debatable ground for the discovery of new pools. Some experimenting has been done in McDonough and Hancock counties for deep sand wells but with poor success so far, the shallow sand being the great attraction; the deepest not being over 700 feet.

The old Lima fields are quiet; an increase in the number of rigs and drilling wells shows that there is still some life in the old pools; though the completed wells are small and add but little to the increase in new production, while but few wells have been abandoned during the month of March, the increase in the price of this oil making it possible to operate a very small well at a profit when connected up by power plants.

The Ontario fields of Canada showed a slight increase in production in 1915 over that of 1914. The increase being about that recorded below:

District—	1914 Barrels	1915 Barrels
Lambton	154,186	164,452
Bothwell	33,961	33,291
Tilbury	18,531	13,898
Dutton	2,190	5,528
Onondaga	2,438	1,528
Belle River	1,191	46
Total	212,497	218,743

The production in New Brunswick was 1,020 barrels in 1915 as against 1,725 barrels in 1914, a decline of 700 barrels.

Ontario natural gas production in 1915 showed a decrease of 584,450 cubic feet; Alberta production a decrease of 2,793,210 cubic feet, while New Brunswick increased 4,866 cubic feet. They are still drilling at the Dingman o. 1, of the Calgary Petroleum Products Company in Alberta.

The company expects to drill this well to a depth of 5,000 feet if necessary. It is producing about 2,500,000 cubic feet of gas per day.

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WRITE FOR BULLETIN NO. 106

METRIC METAL WORKS

ERIE, PENNA.

This same company has another well which is producing about the same amount of gas and it is proposed to pipe the gas from these two wells to Calgary, a distance of about forty miles, where they expect to be able to deliver the gas at the city limits at a maximum price not to exceed ten cents per one thousand cubic feet.

The Moose Mountain Oil Company is drilling a wildcat well twenty miles northwest of the Dingman wells which has reached a depth of 2,500 feet and the Mount Stephen Oil Company is drilling a well on section 25, township 32, range 7 which is now 3,100 feet deep.

Peru, South America, has been in the crude oil producing game for years. The production of oil in that country having increased slowly but steadily since 1905, except that during the year 1913 it took on quite an increase only to fall back again the next year. This decline was caused principally by the breaking out of the great war in Europe.

The report of the production each year, given by the United States Geological Survey, since 1905 is:

Year—	Barrels
1905	447,880
1906	536,294
1907	756,226
1908	1,101,180
1909	1,216,128
1910	1,330,105
1911	1,368,274
1912	1,751,143
1913	2,133,261
1914	1,917,802

The oil fields of Peru are operated principally by English capital; American capitalists do not seem to take much interest. The opening of the Panama Canal is expected to stimulate operators from the United States to take a hand. The first oil sand is found at from 1,000 to 1,400 feet according to location and the deepest at 4,500 feet.

The wells are generally drilled with a standard rig and but little water is found in the wells. The oil is o fhigh gravity, but no gusher wells have been drilled so far, the wells generally being good for from one hundred to three or four hundred barrels a day as an initial production. The wells flow at first but soon settle down to ordinary pumpers. Operations are at present mostly near the sea shore although an effort is now being made to extend the territory further inland.

Some of the oil is refined in Peru but perhaps the majority of it is exported to Europe in its crude state.

From Colombia we have the report that petroleum seepages have been found in all the departments bordering on the Magdalena river as far south as Girardot, where the railway connects the steamboat traffic of the river with Bogota. In the Magdalena basin some optional contracts have been taken which, if made operative, will call for the commencement of active drilling on the lands during the next eighteen months. That active work will be begun in the near future seems certain.

In spite of the fact that the internal troubles of Mexico are still far from being settled, rather they are becoming worse from day to day, field work continues without interruption. Late reports, both from Panuco and Tampila show nothing new of a startling nature; several test wells are approaching an interesting depth and the near future will show some completions that will either extend the producing territory or show some arid spots.

The Huasteca Petroleum Company's last gusher—No. 4 Cerro Azul—started off at a 100,000 barrels per day gait, spurting the oil into the air for a distance of 150 feet. Moving pictures were made of this well flowing, which were being exhibited in New York, where they took fire at a private exhibition being given in the parlors of the Waldorf-Astoria hotel and were totally destroyed.

Imports into the United States from Mexico for February, 1916, were 1,556,443 barrels which was a decrease of 77,558 barrels as compared with January, 1916, but shows an increase of 313,295 barrels when compared with February, 1915.

On January 28, 1916, the market for Pennsylvania Grade Oil reached $2.35; on February 21 it was advanced to $2.40; March 6 to $2.50 and March 17 to $2.60 where it still remains at the close of this report.

The prices paid by the Seep Purchasing Agencies at the present time for oil of all the different grades mentioned below are:

Pennsylvania	$2.60
Mercer Black	2.10
New Castle	2.10
Corning	2.10
Cabell	2.12
North Lima	1.73
South Lima	1.73
Wooster	1.90
Indiana	1.58
Princeton	1.82
Somerset	1.95
Ragland	.90
Illinois	1.82
Kansas and Oklahoma	1.55
Plymouth	1.68
Healdton	.80
Corsicana Light	1.55
Corsicana Heavy	.80
Electra	1.55
Henrietta	1.55
Thrall	1.55
Strawn	1.55
Moran	1.55
De Soto	1.45
Crichton	1.05
Caddo, 38 deg.	1.55
Caddo, 35 deg.	1.45
Caddo, 32 deg.	1.40
Caddo Crude	.90
Canada	2.13

STANDARD OIL SUBSIDIARIES

Stocks—	Par Val.	Bid
Anglo-American	£1	15½
Atlantic Refining	$100	699
Borne-Scrymser	100	315
Buckeye P. L.	50	94
Chesebrough Mfg.	100	975
Colonial Oil	100	170
Continental Oil	100	305
Crescent P. L.	50	40
Cumberland P. L.	100	85
Eureka P. L.	100	205
Galena-Signal Oil, com.	100	155
Galena-Signal Oil, pfd.	100	143
Illinois P. L.	100	171
Indiana P. L.	50	95
National Transit	12½	17
New York Transit	100	178
Northern P. L.	100	98
Ohio Oil	25	233
Prairie P. L.	100	213
Prairie O. & G.	100	408
Solar Refining	100	290
Southern P. L.	100	198
South Penn Oil	100	347
South West Pa. P. L.	100	102
Standard Oil Co. of Calif.	100	245
Standard Oil Co. of Ind.	100	560
Standard Oil Co. of Kan.	100	440
Standard Oil Co. of Ky.	100	370
Standard Oil Co. of Neb.	100	350
Standard Oil Co. of N. J.	100	522
Standard Oil Co. of N. Y.	100	208
Standard Oil Co. of Ohio	100	605
Swan & Finch	100	110
Union Tank Line	100	83
Vacuum Oil	100	235
Washington Oil	10	35

Patented 1915.

RIGBY AUTOMATIC OIL SAVER is released from the casing head by the rope socket tripping latches A and B. Eliminates all danger of breaking the line or saver.

Patented Feb. 7, 1911.

RIGBY IMPROVED OIL SAVER.

Patented 1915.

This **SAND CAP** is released the same as the Automatic Saver, and used in the same ring.

Pat. Dec. 10, 1907; Dec. 8, 1914.

RIGBY ALL-SIZE ROPE CLAMP. Simply change the slips for the rope you wish to use; a minute's work will do it.

RIGBY COMBINED CASING HEAD AND OIL SAVER. In ordering Oil Savers used in under-reaming, say Rigby Combination Oil Saver, and give size of casing and threads. Pat. July 28, 1914.

MANUFACTURED BY THE

Modern Well Supplies Co., Butler, Pa.

Complete the table with the correct forms of the verb.

duction is strongly evidenced by the big companies keenness to take all the gas offered. The Manufacturers Light and Heat Co., have expressed a willingness to take 5 million feet per day if they can get it in that field.

One evening, some weeks ago, Mr. Bredin attended a local theatre in Butler, the chief attraction being Anna Eva Fay, who has acquired a national reputation as one gifted with occult powers enabling her to read the future. Merely for amusement Mr. Bredin wrote on a slip of paper the question, without signing his name, "Will I get oil in the well I am drilling at Hilliards?" Immediately Mrs. Fay called Mr. Bredin by name, startling in itself, as he was practically a stranger in the audience, and gave him the satisfying answer "that he would be both successful in finding gas and oil." The first part of the prophecy has been verified and from the present indications oil will also be a matter of fact when the Rosenberry sand is reached which lies 100 feet below the One Hundred foot.

Since writing the above the second well drilled by the Wildwood Oil Co., located about 500 feet from their No. 1, has reached the pay streak and made several nice flows. The well is estimated good for 50 to 75 barrels per day.

AUTOMOBILE INDUSTRY IS 18 YEARS OLD.

March 24 is the birthday anniversary of the automobile industry. Eighteen years ago on that date occurred the first recorded bona fide sale of an American-made motor car—that is, not an experimental vehicle, but one of a regularly manufactured output. The purchaser was Robert Allison, a mechanical and mining engineer of Port Carbon, Pa., the purchase price was $1000, and the car a single-cylinder Winton phaeton. Mr. Allison was by no means a college soph, looking for a lark, when he invested in a horseless carriage, for he had already passed his 70th birthday. At an age when most men are occupied chiefly with memories, Mr. Allison looked forward with keen enthusiasm to the perfection of the motor car, and when he died on February 3 last, in his 89th year, he had enjoyed a full realization of his expectations. At various times he purchased two-cylinder, four-cylinder and six-cylinder Wintons, and was a Winton Six owner at his death. Indeed he was one of the first and strongest advocates of the six-cylinder motor, and he enjoyed demonstrating the superiority of this type over others.

The Winton Company made single-cylinders from 1898 to 1902 inclusive, five years, at $1,000 to $1,200.

The two-cylinder Winton was first marketed in 1902 and was continued to 1904 inclusive, four years. Prices ranged from $2,000 to $2,500.

Four-cylinders were marketed from 1904 to 1907 inclusive, four years, at from $1,800 to $3,500.

Winton Sixes were introduced in June, 1907, and are now in their ninth consecutive year. Six-cylinder prices have ranged from $2,285 to $4,500.

Will you kindly give me the cost to drill an oil well, everything to be new and first class. The well to be in the Pittsburgh district, and not more than a ten mile haul?

M. B.

The following estimate was furnished by Mr. W. W. Anderson and only holds good for the day it was written, as prices are changing so rapidly:

80-foot standard drilling rig	$ 850.00
600 ft. 6¼ in. 13 lb. casing at 43c	258.00
1600 ft. 2 in. 4 lb. tubing at 12¾c	204.00
1600 ft. 1⅝ in. wood rods, hung, at 9c	144.00
1600 ft. ⅝ in. iron rods	70.40
1 100-barrel iron tank	120.00
Pumping outfit with Cuttle-Grant adjuster	15.00
15 H. P. gas engine, Bradford type	250.00
90 ft. 10 in., 5-ply belt, at $1.49	67.05
Hauling and incidentals	75.00
Total if wood rods are used	$1,983.00
If iron rods are used	$1,917.00

This is approximately the cost of the above material delivered at a point in the Pittsburgh district where it is necessary to haul about ten miles from railroad.

Negritos, near Payto,
Peru, South America.

Will you kindly inform us what is considered the best pumping power and gas engine made in the United States. Up to the present time we have been using steam, but as we have plenty of gas we want to get away from steam. Is there a pumping power and gas engine manufactured in the States called the Reese or Reed? Also is the old Ball engine still made in Butler, and do they make a gas engine.

The boys here from old Pennsylvania are always glad to get the Magazine, and it is read from cover to cover. It is like a letter from home.

In the near future I will write you an article from the South American field as I feel sure it will prove interesting to your readers.

I wish you would kindly remember me to Matt Starr, Sam Redick and Zeph Lauffer.

E. E.

It would be hard to say which of the pumping powers or gas engines manufactured in the United States is the best. You will find several advertised in the Oil & Gas Man's Magazine, and they are the best in the world. You probably refer to the Reid engine. The Ball people are making a gas engine.

At what depth is the Weir sand of West Virginia found and from what does it take its name?

F. O. S., Parker City, Pa.

C. H. Oliver, Manager,
Butler, Pa.

Dear Sir:—

In reply to your favor of 13th, would state that the Weir sand

takes its name from the wells on the Weir Bros.' tract, located on Falling Rock Creek, Elk district, Kanawha county. It is found at an average depth of 2,100 feet or about 200 feet below the level at which the Berea Grit should be found. The best wells have had an initial production of between 600 and 800 barrels. They decline rapidly. The best wells now found in that formation are located on Blue Creek, Elk district. For a time it was thought, on account of the similarity of the oil, that it was the Berea Grit, but those best informed do not hold to that opinion. Hoping that this will meet your requirements and that you are well, happy and prospering, I remain,

Very cordially yours,

D. S. WAKENIGHT.

THE JITNEY.

Whether the jitney has come to stay is still a subject for discussion in motoring circles. One thing is certain, however, the five cent auto ride has made a decided hit with the public in many American cities.

Under the title "The Jitney" the following rhyme appears in the Goodyear Tire News (Canadian Division of The Goodyear Tire & Rubber Company) which illustrates the popularity of these vehicles, in a rather amusing way:

"The festive jitney gaily glides providing cut-rate auto rides and cheats the undertakers; while folks throw out their liver pills and dope for other bad-air ills and break the cure-all fakers. For air at thirty miles an hour forced in our lungs by engine-power beats all the blamed physicians, good ozone plus a jitney bus may make the railway magnates cuss but heals our dispositions. The family dons their opera wraps, disdains to hang on street car straps and signals for a motor, when mother goes to do her shopping street cars pass her without stopping; jitney drivers tote her. The kiddies visit movies now piled in some wheezy motor scow, their hearts aglow with pleasure, while father lights a big cigar, steps in a passing jitney car and goes to lunch at leisure. The funny papers turn their wit upon the pleasure-giving jit, to help fill up a "colyum;" but jokesters write their funny rhymes and still dig up their unspent dimes to swell the jitney's volume. The traffic cop whose stately arm once shielded passing folks from harm is driven nearly frantic and wishes with a sultry oath that jitney cars and drivers both were deep in the Atlantic. Directors of street railway lines advise the use of heavy fines and gasp in consternation when Mr. Common People seems quite satisfied with gas machines for rapid transportation. 'The World Do Move' a poet said, the world has moved, the poet's dead, but let's not be surprised, if coming back when Gabriel blows, we find the world's wiped out its woes by being jitneyized."

Jos. R. Drake, vice president of the Hupp Motor Car Corp., is just in receipt of a letter from Frank Mowleen of Flatbush, New York, with reference to his 1909 Hupmobile. He states that he has now run this car over 90,000 miles and that it is still running as well if not better than when he bought it.

Argentina last year produced 275,000 barrels of oil.

NATIONAL BULLETIN.

We are in receipt of a copy of the "National Bulletin," issued for this year by the National Tube Company, of Pittsburgh, and have installed it in the archives of our sanctum as a valuable addition to our library.

It is a very interesting and instructive work; invaluable as an assistance to the architect and engineer in designing the several piping systems; to the contractor in the construction and installation; to the engineer who is entrusted with the operating and in short to all who are interested in the economical and efficient operation of the completed building.

The book contains some 150 photographic reproductions of the larger and more important financial, office, industrial and public buildings which are to be found in some of the principal cities of the United States. An illustration of the Equitable building, 38 stories high, said to be the largest office building in the world, appears on the front cover and the Continental and Commercial National Bank building of Chicago, Ill., said to be the largest bank building in the world, and is also shown in the book.

All of these buildings contain "National" pipe, which is sufficient evidence of the durability and efficiency of the service.

A LOGICAL DEVELOPMENT.

The production of automobiles by the Standard Steel Car Co. was a logical development.

Regularly engaged in designing and building the steel transportation equipment, of all kinds, which has done so much for the safety and comfort of the traveling public—controlling all necessary facilities, in both men and material—and with an organization trained along the lines, primarily, of determining the best thing to do, and then the way of doing that best thing repeatedly and uniformly—the production of automobiles came merely as a natural sequence.

About four years ago the Standard Steel Car Company commenced to use its resources and facilities specifically in the designing and manufacturing of automobiles—its progressive steps being directed by careful study and analysis under laboratory conditions, supplemented and verified by service tests.

One year ago, having foreseen and experimented with the eight cylinder type of motor, the Standard Steel Car Company brought forward its "Standard Eight"—one of the few of its kind which has been offered to the public—and is now announcing to residents of Pittsburgh and vicinity the Standard Eight for 1916 at $1,375.

OBITUARY.

William Kesselman, aged 83, one of the oldest manufacturers of the city and among its best known residents, died at 1:30 a. m. Wednesday, January 5, at his residence, 616 Brown avenue. Death was due to infirmities of age. He was the senior member of the firm of Kesselman and company, machinists and manufacturers of oil well tools, in this city. He was a man of unimpeachable character and integrity and was widely known and respected.

Mr. Kesselman was born in Germany and was the son of Philip and Christiana Kesselman. He came to America in 1865 and first located in New Castle, Pa., where he followed his trade of machinist and tool maker for five years. He went to Parker in the beginning of the oil excitement and established a shop of his own which he operated for five years and then moved to St. Joe, and opened a machine shop. He came to Butler in 1883 and established a shop of his own which he operated until 1887 when C. J. Brandberg became associated with him under the firm name of Kesselman and company. In addition to the large amount of work done in the Butler establishment the firm conducts a large shop at Parkersburg, W. Va.

In 1860 Mr. Kesselman was married to Miss Magdeline Moser, whose death occurred in 1899. Five children of this marriage survive, Edward H. Kesselman, who is connected with the Kesselman interests in Butler, William Kesselman, who has charge of the business at Parkersburg, Miss Minta and Floyd Kesselman, both at home and Lewis Kesselman, who resides at Parkersburg.

Mr. Kesselman was a member of the First English Lutheran church and was one of Butler's public spirited citizens, playing a prominent part in the early development of the business interests of this section.

Thomas A. McLaughlin, a former well known resident of Oil City, died recently at his residence in Lima, Ohio, as the result of a general breakdown.

Mr. McLaughlin was about 76 years old. He was for many years a resident of Oil City, and while there was one of the most active in every movement for the benefit of the city. He was prominent in the

affairs of the municipal government and was a member of the city council for several terms, and president of the body. In politics Mr. McLaughlin was a staunch Democrat and was considered one of the hardest workers of his party in this section.

The deceased was for several terms president of the Oil City Exchange and for many years was one of the prominent brokers of that institution. His picture still hangs in the old exchange room.

Mr. McLaughlin was born about 76 years ago and spent the early part of his life in Pittsburgh. He fought in the Civil War and following the close of the conflict, in about 1867, he went to Oil City. He started work there for Owston & Sowers and later was employed by J. A. Bostwick & Co. He was with the last named concern for a number of years.

The deceased went to Lima, Ohio, in about 1888. Until the dissolution of the Standard Oil company he was buyer for the Joseph Seep Purchasing Agency in that city. Following the dissolution he was employed by the Ohio Oil company. He retired from active business about a year after the dissolution of the Standard Oil company.

The name of Thomas A. McLaughlin, when mentioned to the old-time residents of Oil City, brings visions of the Seneca baseball club of the early '70's, for the deceased was its catcher, and in this position became known to every resident of Oil City and to the members of amateur clubs from all over that section which were taken there for games. Mr. McLaughlin was a good player and gained a name in baseball throughout that section for his athletic work.

Mrs. Margaret Murray, in her 80th year, died February 21st, at the family home at Chapmanville. The immediate cause of death was an attack of la grippe, though she had been an invalid for many years. She is survived by her husband, Thomas Murray, and by three daughters and two sons, namely, Mrs. J. P. Monnin, residing near Chapmanville; Miss Mary B. Murray and Miss Alice Murray, at home; and Joseph and F. F. Murray, publishers of The Petroleum Gazette. She is also survived by one brother, Matthew Carr, of Sheboygan, Wis.

Mrs. Murray (whose maiden name was Margaret Carr) was born in County Monohan, Ireland, May 18, 1836, and she came as a little girl to this country with her parents, who settled at Buffalo. There she grew up and was married to Thomas Murray. In the early oil excitement they came to the Pennsylvania oil regions and located at Chapmanville, which has since been their home. Most prominent in her characteristics were her great love of children and her sympathy for those in sickness and distress. Coupled with this sympathy she possessed a special aptitude for giving it application, and there are many to remember, almost as with a touch of relationship, the motherly kindness and ministrations of "Ma" Murray, as it seemed natural for them to call her.

NOTES OF INTEREST.

Mexico appears destined to become the world's principal source of petroleum.

It is reported that oil fields have been discovered in the Vacuifa Mountains of Bolivia.

The Tidewater Oil Company has increased its capital stock from $5,000,000 to $30,000,000.

Small kerosene stoves are practically the only heating and cooking stoves used in Paraguay.

Holland has a plant for manufacturing illuminating gas from petroleum residue by dry distillation.

Petroleum has been installed as fuel in Chile's great nitrate works at a saving of more than 30 per cent of the cost of coal.

Oil lamps lighted the London streets in 1861 and onward, while gas came into use just over 100 years ago.

The lakes of oil in the western oil fields prove death traps to the ducks which alight on them under the impression that it is water. The birds rarely escape.

The Oil & Gas Man's Magazine has just received the National Bulletin No. 26 issued by the National Tube Company, containing almost one hundred engravings and is church full of information for the oil and gas men. One of the most interesting articles is the Autogenous Welding of National Pipe.

F. G. Clapp, Managing Geologist of The Associated Geological Engineers, has returned from the Oklahoma fields and may be addressed in Pittsburgh for a few days.

Gasoline sells for approximately 60 cents a gallon in Spain. The price is greatly increased by high import duties and heavy freight rates. In consequence the use of automobiles is confined to the wealthier classes.

The codfish lays a million eggs,
While the helpful hen lays one;
But the codfish does not cackle
To inform us what she's done;
And so we scorn the codfish coy,
But the helpful hen we prize;
Which indicates to thoughtful minds
It pays to advertise.

"We have been getting big shipments of Goodyears in England but even these have not permitted us to fill all our orders" says P. D. Saylor, Managing Director of The Goodyear Tyre & Rubber Co. of Great Britain, who has just arrived from London and is spending a few days at the Akron headquarters in the interest of Goodyear's European trade. "I came over on the Rotterdam which has her name painted in very large letters on both sides of the ship, illumined at night, to obviate the possibility of attack through mistaken identity. My trip was entirely devoid of any of the features which so many travelers have been reporting. All was serene and tranquil."

Sections of the oil-bearing formation at Thrall have been pronounced by petrographers of the United States Geological Survey, who have examined them microscopically, as being of igneous origin. Thus the theory that petroleum is found only in sedimentary rocks is upset.

The stocks of crude oil and refined products in Roumania now amount to the enormous figure of 7,190,000 barrels. All the petroleum enterprises in the country are doing their best to rapidly increase the storage accommodation, and several companies have already dug earthen reservoirs in order to store the largest possible quantity of crude oil.

A new method of using coal in competition with oil fuel has been tried at Vancouver, British Columbia. Those conducting the experiments say that crushed coal can be supplied to steam producing furnaces by the same method in use for oil. It is proposed to use the new process for smelting in the big mining plants.

William H. Hite, who has been connected with various local firms in the oil and gas well supply business for the past 20 years, has resigned his position as bookkeeper for the Spang Company at Butler. He will take charge of the Evans City store of the Frick and Lindsay company of Pittsburgh, being connected with the oil and gas well supply division. For the past 10 years Mr. Hite has been affiliated with the Spang and Phillips interests in Butler. He will remain a resident of Butler, traveling to and from Evans City on the interurban cars. Mr. Hite, who is well known throughout the Butler county oil fields, is well qualified for the new position, and there is no doubt that he will fill the place with entire satisfaction to his employers.

NOTICE.

On account of the increased cost of all material and labor entering into the manufacture of our products, all quotations are hereby withdrawn. Quotations will be given upon request.

Respectfully,
SPANG & CO.,
Butler, Pa.

Bartlesville, Okla.,
July 27, 1914.

Mr. R. A. McKinney,
General Agent,
Manhattan Rubber Co.,
Pittsburgh, Pa.

Dear Sir:

Your letter of July 21, addressed to Mr. Alfred J. Diescher, has been referred to the writer for answer. In reply to same would advise that in all the paranite C Coupler rubbers which we have used on the various lines of the Wichita Natural Gas Company, the Wichita Pipe Line Company, we have yet to find a rubber that has blown out or failed either on high or low pressure work. In my opinion paranite C gaskets are the best that can be made for gas service, being far superior to the common rubber gaskets or to asbestos ones.

Yours very truly,
PURCHASING DEPARTMENT,
By R. O. STULL,
Pur. Agt.

Quapaw Gas Co.
Wichita Natural Gas Co.


Input
Output
Algorithm

Department of the Interior.

"The Condensation of Gasoline from Natural Gas" is the title of Bulletin 88, just issued by the Bureau of Mines, George A. Burrell, Frank M. Seibert, and G. G. Oberfell, authors.

This report treats of a method of preventing some of the waste of the natural gas incidental to oil mining. This method, the condensation of gasoline from natural gas, offers to the oil operator and others a profitable means of utilizing some of the oil-well gas now being wasted. The most desired constituent of crude oil is obtained, the production of oil is not hindered, and the gas, after the extraction of gasoline, can be returned to the leased area to drive pumps or into pipe lines for uses to which natural gas is ordinarily put, generally with its fuel value lessened only in a slight degree.

The authors say: "Gas may be found in a sand and separate from oil. It may be found in more than one sand separate from the oil, or the gas sand may be just above and in contact with the oil sand. A given sand may produce oil and gas in one place and in another part of a territory gas only.

"Gas may come from the same sand as the oil itself. It is this manner of occurrence of gas and oil that the authors desire to emphasize, for under these conditions the gas is frequently mixed with enough of the gasoline constituents of the oil to warrant the erection of a plant for the purpose of condensing the gasoline.

"The gas usually finds its way to the atmosphere through the space between the casing of the well and the tubing inserted for the removal of the oil. This gas is the so-called 'casing head gas.' At the beginning of an oil flow when the flow is natural, a large quantity of gas escapes to the air through the same tubing as the oil. Where the gas finds its exit to the atmosphere apart from the oil at the casing head it is a simple matter to make pipe connections between the casing head and any desired point where the gas is to be utilized. This is frequently done when the supply of casing-head gas is sufficient to warrant its utilization, but frequently, when the supply exceeds the small demands of the lease, the excess is wasted.

"When a well is first drilled, the quantity of gas escaping with the oil from the tubing is frequently enormous, being 10,000,000 to 15,000,000 feet or more at times. This gas is wasted. The flow in time diminishes.

"When gas comes with the oil in the flow pipe, the two are often separated by means of a gas trap. The oil, entering the top of a drum, settles to the bottom and is withdrawn, and the gas flows off at the top. Many of the plants in California utilize gas that flows with the oil for condensing gasoline. One gasoline plant in the Cushing field, Oklahoma, also uses trap gas. A new type of trap for saving gas from gushers and separating the gasoline is described in this report.

"Oil wells that have passed the flowing stage and are being pumped may still continue to give off much gas at the casing head. The

is needed per horsepower-hour for gas engines that are used on leases for pumping oil wells. If there is not enough of the gas available for working pumps, it is all allowed to go to waste, or perhaps some is used for heating and lighting a few scattered houses on the lease.

"The efficient utilization of the wasting casing-head gas ordinarily is a difficult problem. The many miles of pipe that would have to be laid to transport it from a field would usually be an unwarranted expense. However, some towns, among which may be mentioned Warren, Pa., and Sistersville, W. Va., are lighted and heated largely with casing-head gas.

"In general, however, the oil man considers casing-head gas as waste gas and its escape necessary in oil-well operations, to permit the maximum flow of oil into the well from the surrounding strata."

The bulletin also treats of the effects of drilling neighboring wells; the effect of formation of waxy sediment; the history of the making of gasoline from natural gas; the chemistry of natural gas, and many other matters of interest along these lines.

NEW PUBLICATION

Of the West Virginia Geological Survey.

There has just been issued a very important and interesting volume by the West Virginia Geological Survey, Morgantown, W. Va. This volume is described in the following extract from the printed circular of the Survey and the reader is also told how to secure a publication:

(24) Detailed Report on Lewis and Gilmer Counties, by D. B. Reger, issued under date of March 1, 1916, containing 660 plus XX pages of introductory matter, and illustrated with 30 half tone plates and 12 figures or zinc etchings in the text, and accompanied with a separate case of topographic and geologic maps covering the entire area in single sheets. The soil map and report will be published later. Both of these counties lie within the coal, oil and gas belt of the State, and the economic geology and structural map of both will prove of great value and interest to all. Price of Report with case of maps, delivery charges paid by the Survey, $2.00, but for combination price with other publications, see general circular of the Survey. Extra copies of geologic map, $1.00 each, and of the topographic map, 50 cents each. West Virginia Geological Survey, P. O. Box 848, Morgantown, W. Va.

Bessemer & Lake Erie R. R.

Time Table in Effect Sept. 13, 1914.

TRAINS LEAVE BUTLER.

Eastern Standard Time, as follows:

No. 12—4:40 a. m. (Note) for Erie, Conneaut, O., and Meadville.

No. 14—9:40 a. m. DAILY, for Erie, connecting week days for Hilliards, Meadville and Conneaut, O., and W. A. R. R. points.

No. 10—2:45 p. m., DAILY, connecting week days for Meadville and Conneaut, O.

No. 2—5:00 p. m. (Note) for Grove City, Mercer and Greenville, connecting with W. A. R. R.

No. 43—6:30 a. m. DAILY, for East Pittsburgh.

No. 9—11:45 a. m. (Note) for East Pittsburgh.

No. 11—6:10 p. m. DAILY, for East Pittsburgh.

TRAINS ARRIVE AT BUTLER.

No. 1—9:07 a. m. (Note) from Greenville.

No. 9—11:40 a. m., DAILY, from Erie.

No. 11—5:55 p. m., DAILY, from Erie.

No. 13—9:37 p. m. (Note) from Erie.

No. 14—9:25 a. m., DAILY, from East Pittsburgh.

No. 10—2:35 p. m. (Note) from East Pittsburgh.

No. 44—7:25 p. m., DAILY, from East Pittsburgh.

NOTE—Trains 12, 2, 1 and 13 on Main Line, and Nos. 9 and 10 on East Pittsburgh branch run daily except Sunday.

E. D. COMSTOCK,
G. P. A., Pittsburgh.

W. R. TURNER,
Agent, Butler, Pa.

THE COMPRESSIBILITY OF NATURAL GAS AT PRESSURES UP TO 35.5 ATMOSPHERES

By
G. A. Burrell, Chemist,
Bureau of Mines.

Technical Paper No. 131, entitled "The Compressibility of Natural Gas at Pressures up to 35.5 Atmospheres," by G. A. Burrell and I. W. Robertson, will be issued by the Bureau of Mines within the next ten days. Experiments are described therein that disclose a matter of great importance to the natural-gas industry; namely, that in measuring natural gases at high pressures, a mistake of as great a magnitude as 10 per cent or greater of the total amount of natural gas measured, has been made and is being made at present in many cases.

For years the natural-gas industry has accepted as true in measuring natural gas, a law discovered by Sir Robert Boyle in 1662, namely, that the product of the pressure and the volume of the gas is a constant at all pressures, or that the volume of gas varies inversely as the pressure applied to it. This is not strictly true, and neglect of the error has resulted in enormous miscalculations in the natural-gas measurements. The law may be accepted as true only for pressures close to atmospheric. It so happens that billions of cubic feet of natural gas are yearly measured at pressures greater than atmospheric. Pressures of 300 pounds per square inch or greater are common. At 100 pounds per square inch an error of 3 per cent has been made, at 200 pounds per square inch an error of 6 per cent, at 375 pounds an error of 11 per cent, and at 520 pounds an error of 15 per cent has been made in many cases. Natural gas at these pressures is more compressible than an ideal gas (for which Boyle's law holds). A concrete example will make the matter clear. If 50,000,000 cubic feet of natural gas is measured per day at a pressure of 200 pounds per square inch and no correction is applied for the deviation from Boyle's Law, then an error of about 3,000,000 cubic feet of gas is made. Instead of the measured amount being 50,000,000 cubic feet of gas per day, as supposed, it is actually 3,000,000 cubic feet more or 53,000,000 cubic feet.

Changes in the Price of Oil

The following table, furnished by W. C. Coles & Co., 61 Broadway, New York, N. Y., gives the highest and lowest price paid for oil, each year, since 1860:

Year	Highest	Lowest	Year	Highest	Lowest
1860	$20 00	$ 2 00	1888	1 00	71⅜
1861	1 75	10	1889	1 12½	79½
1862	2 00	10	1890	1 07⅞	60¾
1863	4 00	2 00	1891	81⅜	50
1864	14 00	3 75	1892	64⅛	50
1865	10 00	4 00	1893	80	52⅞
1866	5 00	1 65	1894	95¾	78½
1867	4 00	1 50	1895	2 69	94½
1868	5 50	1 80	1896	1 50	90
1869	7 00	4 25	1897	96	65
1870	4 90	2 75	1898	1 19	65
1871	5 15	3 40	1899	1 66	1 13
1872	4 10	3 00	1900	1 68	1 05
1873	3 05	1 00	1901	1 30	1 05
1874	1 90	45	1902	1 54	1 15
1875	1 65	90	1903	1 90	1 50
1876	4 23⅛	1 48¾	1904	1 85	1 50
1877	3 70	1 53¾	1905	1 61	1 27
1878	1 87½	78¾	1906	1 64	1 58
1879	1 28¾	63⅛	1907	1 78	1 58
1880	1 24⅜	71¼	1908	1 78	1 78
1881	1 01¼	72½	1909	1 78	1 43
1882	1 35	49¼	1910	1 43	1 30
1883	1 24¾	83¼	1911	1 35	1 35
1884	1 15⅝	51¼	1912	2 00	1 30
1885	1 12⅝	68	1913	2 50	2 00
1886	92¼	60	1914	2 50	1 45
1887	$ 90	$ 54	1915	2 25	1 35
			1916	2 60	2 25

Notice to Our Subscribers

This Magazine is published in January, April, July and October of each year.

It is intended, especially, as a book for reference in all matters concerning the Oil and Gas business, and we are glad to receive items from friends regarding the same.

The attention of the advertising public is called to the particular advantages our Magazine possesses as a medium between them and the general public, combining, as we do, the romance of the business with the sterner, drier facts and figures which necessarily go with it.

If you like the Magazine, speak to your friends about it; if you have any criticisms to offer, or improvements to suggest, call our attention to them. Each number will be complete in itself. Our usual high standard will be maintained.

Copies of this Magazine may be found on file in the British Museum in London, England, and the New York Public Library, 42nd St. and 5th Ave., New York City.

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ANCIENT HOME OF THE CLIFF DWELLERS.
"The Expiation of Dan Ingraham."

The Expiation of Dan. Ingraham

A Tragic Story of Early Oildom.

By Charles R. Watson.

IT was mid-summer time and the trees and verdure of the "Great West" wore their most attractive attire and Dame Nature appeared at her best.

Seated within a luxurious Pullman car that formed part of a palatial train, speeding over the scenic Denver and Rio Grand Railway, was a small group of men. Men whose names stand for success in the Pennsylvania oil regions and whose individualities have left their impress on one branch or another of the development of this wonderful phenomena and gift of nature from almost the initial stage of the business. These men, like hundreds of others, were compelled to forego their accustomed ocean voyage on account of the great cataclysm of war that has convulsed practically the entire Eastern hemisphere, and were seeing their own wonderful country more thoroughly than they had ever done before.

Returning from California, where the two marvelous expositions had been viewed with the keenest interest and pleasure, they heard the "call of the wild" and the romantic idea became obsessive with them to view the scenes in the wonderful canons of the Colorado far from the pathway of the ordinary tourist.

Fitting out an expedition was only the work of a few days and the party was soon on its quest of adventure and discovery.

We will not dwell at great length upon the grandeur of the places visited and the sights unfolded during the many weeks that elapsed since the little group left on the eventful trip. Suffice to say that, in passing through this picturesque land of natural wonders, the oil geniuses were greatly impressed with the strange, weird and appalling spectacles that presented themselves on every hand. Here the Gods—Jupiter, Juno, Venus, Minerva, and many others — have thundered and contended for ages, building square-faced mountains around sequestered parks, sculpturing monuments in beetling cliffs, rending chasms five thousand feet deep for the passage of angry waters; cliffs, towers and pinnacles rising in ten thousand grotesque shapes and presenting a grand, grim and astounding panorama.

It was on the afternoon of a glorious day that the travelers happened upon scenes of the ancient cliff-dwellers, which they had been looking forward to with quickening pulse. Who were these people that had lived in these inaccessible places; and why did they select such a locality, devoid of all vegetation, for their habitations? These unanswerable questions were upwards in the minds of the amateur explorers as day light began to wane. While busily trying to solve these

problems that have puzzled generation after generation, one of the party, who was somewhat in advance, came to a place which revealed evidences of dwellings grouped in what appeared to have been communities. There were foundations of great square blocks, single buildings and circular enclosures. All about were remains of pottery, flint chips, arrow heads, etc., that had lain there, undoubtedly, for centuries, showing unmistakable evidence of a once prosperous and numerous settlement of a wholly forgotten, prehistoric people. The place was one of utter barrenness and dreariness where no soft features mitigated the unbroken horror. A terrific and howling desolation. But to the astonishment of the oilites there were indications that one of these little habitats among the cliffs showed conclusive signs of having beeen occupied less than a thousand years ago, the space of time conjectured to have elapsed since the original occupants were at home.

The steps that had been cut into the rocks by the ancients as a means of ingress and egress to and from their homes above had undoubtedly been utilized in more recent years for the same purpose. The curiosity of the visitors had now reached its height, at the revelation that some one had come into this wild country to live, where the very silence of the place was sepulchral and connected with the ruin of ages. It was only a matter of a few minutes to climb the ample steps, and to find themselves inside a perfectly formed little house, sandwiched, as it were, among the crevices of the horizontal strata of the rocks of which the bluffs were composed.

It was some time before the intruders became accustomed to the uncertain light sufficiently to distinguish objects in the room, for such it might be called, though more like a reception hall in a small modern home, with little rooms on each side of the entrance. The windows were wood encased and stained with a preparation which had not only given it a dark color but evidently had helped to preserve the wood. Skins and blankets had been used to keep out the howling storm, but everything now presented an appearance of decay and ruin. Stepping into the main room of the little castle, these men, who ordinarily were possessed with iron nerves, were shocked beyond expression to find themselves in a chamber of death; for lying in a chair, that had been hewn out of the rocky wall ages ago, was the body of a tall man, who undoubtedly had once possessed a well-knit and powerful frame, capable of enduring any physical effort he might undertake. At death, he had probably reached the age of sixty or more years. His beard was long and white and his hair extended down over his shoulders in tangled masses. He lay in a crouching position, with face upturned, and his white, even teeth grinned in a ghastly manner through his beard. How long since life had left the body could only be conjectured, as the rarified air in all its purity had been exceedingly kind to the flesh, so that the remains were in such an excellent state of preservation that life seemed to have just departed from its tenement of clay.

The acknowledged leader of the expedition was a man who had passed the three-score and ten period of life. He had met with many adventures in the oil country, having followed the occupation of an oil scout during the time when nerve was the chief asset in the

work required. He began a careful examination of the place that evidently had been the home of the recluse for a length of time that could only be surmised. After a brief interval an exclamation of surprise brougth the other members around him. The circumstances that caused the sudden outburst was soon apparent, for placed on a narrow ledge in the rocky wall were several long bottles, or more correctly glass tubes, containing crude oil. They were carefully labeled, but time had almost effaced the writing. Sufficient remained, however, to furnish the information that the samples, for such they were, had been taken from oil wells that had played an important part in the development of the Pennsylvania oil regions in the latter 60's. In addition, in a corner were found specimens of sand rock or drillings. The hermit had evidently retained these indicative reminders of his former success in oil and brought them along to his solitary retreat as mementos of the past.

The curiosity of the men was now aroused to the highest pitch, and they were eager to learn all they could touching the life of this strange "Hermit of the Rockies," who plainly had spent part of his life amid the stirring scenes of the early days in oildom; and had wandered into these western wilds to pass his days in solitude and finally cross to that unknown country "unwept, unmourned and unsung."

The shadows from the rugged buttes had grown longer and night was fast creeping on so that it was difficult to see objects in the cave-like place. Wax candles, a part of the equipment, were brought forth, and by their flickering rays, the investigation was continued. On the stone floor, beside the chair where they had been carefully placed, were a number of sheets of paper grown yellow with age, others were scattered over the floor as though tossed there by the wind. The ex-scout gathered up the sheets, and arranged them in numerical order, and by the wavering light read the tragic story of the dead man's life, whose body they had accidently discovered.

The remarkable narrative, as penned with evident nerveless fingers and a fast failing vitality, is here set forth, being substantially as follows:

"Realizing that the sands of my life are slowly, but certainly, running away and that my tired soul will soon be at rest, I write these lines and tear the mask from the veil of the past and lay bare the secret that has gradually been eating my heart out during the years that these mountains have been my citadel and my refuge. I have a two-fold motive for this determination. In the first place it will, to some extent, ease my conscience, if only to write this confession, and, in the second, there is a possibility that these papers may fall into the hands of some one whereby it may find its way into print and be generally read and point a moral and thus be the means of preventing some one from making the terrible mistake that I have made.

"In palliation I write these words, being impressed with the thought that I have expiated my crime a thousand times by my self-imprisonment and intense suffering—physically and mentally. In this I am in complete accord with the view so often expressed that he who sins in this life will surely, sooner or later, meet punishment in a degree commensurate with the sin committed, ere he surrender to the King of Terrors. To do right brings good; to do wrong brings

misery. These are immutable laws and cannot be changed.

"I have had in mind for a long time to write these words confessing my dastardly crime, as I have confessed it in prayer, almost constantly, but I have been deterred by the fear that by some possible chance its discovery might lead to my apprehension and I be called before a court of justice to face an outraged law. This physical weakness has now departed and if I had the strength I would go back to civilization and tell this story as I tell it now, but alas, too late, too late, for in a short time this place that has been my home for so long will be my stately sepulchre.

"I, Daniel Ingraham, was born and reared in one of the interior counties of the Empire state. My father was a prosperous farmer and he and my good mother spent many hours dreaming out a career for their only child that would redound to their happiness and my success in life.

"After due preparation I entered one of the leading colleges and took up the study of medicine, expecting one day to write with pride the professional title of M. D. after my name. One year's hard work pursuing this line of studies convinced me that I was not temperamentally qualified for that sort of work, so I abandoned it for the law. I will not take up the short time left me with a detailed account of my college life, as my experiences were pretty much the same as that of other boys hunting for knowledge. I worked industriously and graduated in due time with high honors. My first great sorrow came the second year of my attendance at school with the death of my good mother which was followed shortly after my return home by the passing away of my father, leaving me practically kinless in the world. My object now was to get away from the farm as soon as possible, where memory was constantly evoked and sadness aroused by every little thing that I came in contact with. One day I read in a New York paper about the wonderful oil wells that were being struck in the western part of Pennsylvania. The article was one extravagant of detail touching the wealth producing enterprises rivaling an Arabian fable. I immediately got the fever in its most dangerous form and without further ado began to lay plans to locate in the oil regions. A fortnight later found me one of the cosmopolitan crowd that made up the people of a fast growing oil town. I at once identified myself with the rapid growth and fabulous wealth of this newly discovered commodity. Like many others of the tenderfoot class that had poured in from farms, villages and cities, I was soon busily occupied in helping transform the little place of a few board shanties into a teeming, thriving, bustling city. My law practice proved very remunerative and fortunate investments in real estate gave me the money to take up a few leases which brought forth oil wells of goodly calibre. In a short time I was seated on the pinnacle of good fortune, becoming in due course of time one of the substantial business men of the community.

"I had now reached my 24th year without having been deeply in love. I had, of course, had transient periods of inclination towards more than one of the many girls that I came in contact with at school but they appeared rather insipid to me and that passion that was later developed remained undisturbed by these associations. My sole ambition, at this time, was to

amass wealth and become a man of distinction among my fellow men.

"The oil region at this time, was made up of a cosmopolitan people from every walk in life. There was no question of caste and one's antecedents were not inquired into very closely. All that was required was a gentlemanly observance of a code of unwritten rules that every one was instinctively cognizant of. To be honest and upright in one's dealings with his fellows, observing the courtesies that women are entitled to, if followed, would give one carte-blanche to the best homes and society the town afforded.

"Then one day there came to the "city of oil" a woman, Elsie Shannon, by name. She had been the prima-donna of an opera troupe whose treasurer had skipped with the show's exchequer, leaving the members of the troupe stranded. Elsie possessed a liquid contralto voice, a charming personality, a figure like the goddess of love and beauty, Venus, deep blue eyes that shown with sparkling brightness, exquisite, fairness of complexion, delicately chiselled features and shoulders sloping and gracefully molded, over which fell ample and golden locks. Is it any wonder that the men in this little oil world, where women of culture and beauty are scarce, fell over themselves to pay her homage? From my first meeting with her I became fascinated, infatuated, madly in love with one determination to gain this lovely creature for my very own.

"Among the many who had come within the circle of this beautiful but ambitious, and, as subsequent events proved, altogether heartless siren, was Colonel Harkins. He was a southerner to the manor born, had served with distinction in the Confederate army, and at the close of hostilities, like so many other army men, had come north to repair his shattered fortunes in the oil regions. For a time the Colonel was a favorite with Elsie. His attractive military figure and commanding way seemed to appeal eloquently to her and I was sick at heart to feel that the prize was gradually slipping away from me. The colonel, however, lacked one thing—money. He had as yet not struck oil. About this time I was rewarded with a gusher that set oil circles all agog.

"One evening when the air was scented with the fragrance of flowers, the oft-repeated cry of the whip-poor-will was heard as he circled above us and the silver flooded spot where we stood seemed like heaven to me, I poured forth all the tender sentimentalities that sprang from my great passion. I love you, I love you, I whispered, to which she made no reply, only gave me a smile of consent, closing her eyes and permitting me to press my lips to hers. At the time I was so carried away with my own passion that I did not realize the utter lack of any reciprocal feeling on her part. But how frequently since have I thought of it with a shudder and cursed myself for a fool. That smile has haunted me without ceasing. I see it awake; I see it in my dreams; it is ever before me.

"The announcement of our engagement brought congratulations and many entertainments and everything ran along pleasantly; there was only one 'fly in the ointment.' Col. Harkins endeavored to hide his discomfiture under a well disciplined personal character, yet there was that something about him that he could not cover up that told me, as plain as words, that I had a bitter and unscrupulous enemy.

"My happiness was now complete; wealth sufficient for all pur-

poses, a beautiful woman to adorn my home, and looking forward to the time when children would bless our home, I could well say with the great Bard:

She is mine own,
And I as rich in having such a jewel
As twenty seas, if all their sand were pearl,
The water nectar and the rocks pure gold."

"Alas for the awakening!

"We were married without ostentation, spent a few weeks in travel, returning to the oil country town where in the meantime wild excitement rule and fabulous wealth was being brought from the subterranean depths of the earth. Among the fortunate ones was my late rival.

"Having prepared an elegant home with every luxury that money and times provided, I entered it, feeling that my cup of happiness was full to overflowing. Idolizing my beautiful wife, time passed swiftly like a dream and then came the rude awakening like a thief in the night.

"My luck that had been proverbial for big wells now commenced to change and everything that was formerly gold now turned to ashes. Dry hole followed dry hole with unvarying regularity, and one day I found myself nearly bankrupt. Realizing the uncertainty of the business and having confidence that Dame Fortune would again smile on my efforts I did not weaken in my faith and I decided to work still harder for success. At this time the true nature of the woman asserted itself. There was no misunderstanding the change in her demeanor towards me. She became as an icicle. The hand that could no longer count out bank notes or lavishly sign checks for large amounts was rudely pushed aside as being of no further use to her.

"The scales had partly fallen from my eyes previous to the final denouement and I saw her as a woman with no thought for anything but her selfish gratifications; her highest aspiration was to adorn a perishable body and vanity was to her the spring of life, attracting men to her, like the sirens of old, by the fatal power of beauty. Yet while I saw these many imperfections my own soul was so filled with love my mind soared to such exalted regions of adoration it responded only to what was beauty and grace, therefore, I did not upbraid or censure her for her change in manner and want of sympathy at my change of fortune, for fear of causing her a moment's pain.

"I was expecting to tap the sand in a well that I hoped would mend my fortune and place me again on my financial feet. This kept me away from home for several days at a time. The well came in large and as I watched the golden fluid pouring into the tanks my only thought was that I could again furnish my wife with the things she desired. With this uppermost in my mind, and in high spirits, I started for home. Alas, what a home coming! Entering the house I found everything in a confused state. Not grasping the meaning of this disorder, I was soon enlightened by finding a note on the library table. Its contents were cold and formal in expression, and heartless in its brevity. In substance, that she no longer loved me and now that I could not afford to keep up the style to which she had been accustomed she had decided to relieve me of the burden of her support. I stared at the writing in dumb amazement; my faculty of comprehension remained for the in-

stant dazed. Gradually the tempest of incoherence and despair subsided into a state of numbness that seemed like death. The shock was too great for my sensitive nerves; brain fever seized me and I languished in the hospital for several weeks. My naturally strong constitution, however, prevailed, and I slowly regained my former vigor. Life now had lost all interest for me, thoughts of suicide floated through my mind but these were put aside for a more terrible determination. This was enhanced when later I learned that Elsie and Harkins had departed together.

"Being driven to that state of mind in which one is more ready to act precipitately than to stop to reason aright, I resolved upon vengeance that would be complete in every particular. A spasm of hate was consuming me. Hate of the woman who had deceived me, hate of the person that had stolen her away from me. I hugged the hate; it gnawed at my very vitals and poisoned the well springs of life. The elemental savage that is in all men was aroused in overwhelming passion. Whichever way I looked was hell—myself was hell. I felt the injury could only be atoned for by the most simple and primitive vengeance.

"From the fact that Harkins was a southerner, led me to think that the south would naturally be his objective. Late one evening, I disappeared from the oil country never to enter it again. For many weeks I traveled through the land of Dixie without getting a trace of the eloping couple. Days had slipped into weeks and weeks into months without my getting a trace of the fugitives. I cursed myself for a fool but never for a moment did I entertain a thought of giving up the hunt.

"It was the day of the Mardi-Gras, the day before Ash Wednesday (the first day of Lent) and, New Orleans, the southern metropolis of the United States, was en fete. The thoroughfares were densely packed with masqueraders and every available spot, balconies and windows were filled with spectators. The picturesque brilliancy of the passing throngs had but little effect upon the turbulent spirit within me that time had only increased rather than diminished. I got away from the hilarious crowd and soon found myself in one of the small parks when seating myself upon one of the many benches that were now vacant, watched with a nonchalant air the many passing vehicles. Suddenly, as if an electric current had passed through me, my attention was attracted to a barouche that was passing. There, seated within, were Elsie and Harkins. It was only a moment for me to call a cab and with the offer of an extra fare, I was soon in hot pursuit. The chase did not last long, as the carriage was driven rapidly to a leading hotel, where the couple alighted, and entered, apparently somewhat hurriedly. Now that I had my quarry located I went to my hotel to think out my next move.

"The following morning I assumed a disguise as a cab driver and appeared at the hotel as in quest of work, and on inquiry was dismayed to find the birds had flown. I readily understood the reason. The recognition in the park evidently had been mutual. Money, the key that unlocks all doors, soon gave me the knowledge that enabled me to trace them to Mexico City, where I followed only to learn they had departed for Central America. I immediately set out for Honduras, the American Egypt, where it was

decreed I should again meet them face to face.

"But I must hasten with this recital, as I feel my strength gradually ebbing away. In early life chemistry had a great fascination for me and when in my first college days, I devoted a great part of my time to its study. The peculiar properties of the various poisons became of special interest to me and my experiments along that line were prodigious and engaging. One day while practicing an experiment on an animal, I discovered by the use of certain elementary substances I could compound a subtle fluid, which, in contra-distinction to chloroform, would cause almost instant death and absolutely leave no evidence upon the victim that death had been produced by poison. With this Borgia knowledge in my possession, I laughed with demoniac glee at the surprise I had in store for my beautiful wife and the Colonel. Again, through the use of that potent agency—money—I soon had the information that my victims would, on a certain day, visit the celebrated ruins of Chopan. The bribing of the cicerone to conduct his patrons to a certain place seldom visited by tourists, my appearance on the scene at the opportune moment garbed in a native costume, the desertion of their guide and their supposition that robbery was the motive of the attack, and their consternation when I made myself known, it is needless to dwell upon.

"Binding them securely the insidious poison had soon performed its mission. Harkins met his fate without flinching like a southern born fighter naturally would, seemingly without fear or attempt at supplication for mercy. But his cold grey eyes pierced me like daggers and I seem to feel them yet. Elsie, however, was wild with fright, the fear of death blanched her cheek. She pleaded for mercy eloquently and pathetically. As I looked upon the symmetrical proportions of her form, that the tightly drawn cords displayed to good advantage the alabaster whiteness of her throat and neck, causing her exquisite fairness of complexion to look almost transparent in the half light of the old ruin, the graceful slope of her admirably shaped shoulders, the finely developed bust, her rosy, voluptious mouth, splendid dreamy eyes shaded by long, beautiful lashes, a picture was presented of ideal, youthful loveliness seldom seen. Being a well sexed man, these charms naturally appealed to me, and for a moment a feeling of weakness hovered over me. But my nature swung again from the sunny warmth of the equator to the frigid cold of the North Pole. The appeals for mercy fell upon a heart that had turned to adamant. As well ask it of a wild beast thirsting for blood. The accomplishment of my purpose completed and with a last look of hatred I stole silently away.

"I left Honduras immediately, stopped briefly at Mexico City, then fled northward into the lands of Arizona and New Mexico. By this time a reaction of my feelings had set in and I saw myself as I really was—a vile, abject guilty thing like Cain, fleeing into the wilderness for respite from my dastardly deed. My one desire was to get away from civilization; to hide my face from my fellowmen. I wandered for many days through the lands once the home of the Aztec and Zuni, finally reaching this solitude, where no recent hand but nature has been at work. With the exception of infrequent trips to trading posts for supplies, where I was merely classed as a prospector, this has been

my abiding place ever since. My life here has been one continuous nightmare and I have prayed incessantly for forgiveness and death.

"Tomorrow, and tomorrow, and tomorrow,
Creeps in this petty pace from day to day,
To the last syllable of recorded time;
And all our yesterdays have lighted fools
The way to dusty death. Out, out, brief candle!
Life's but a walking shadow; a poor player,
That struts and frets his hour upon the stage.
And then is heard no more; it is a tale
Told by an idiot full of sound and fury,
Signifying nothing."

With the quoting of Macbeth's soliloquy the graphic story abruptly ended, as the writer evidently had grown too weak to proceed further.

The twilight had deepened and one by one the travelers slipped down to the ground from the ancient home. Under the clear, star-lit night, illumined by the moon which shown like burnished steel through the rarified air, the little group gathered to discuss the wonderful events of the day. The ex-scout appeared to be laboring under some great agitation of mind; he sat with his head bowed in his hands, apparently in deep thought, and did not speak for some time. Finally, looking up, he said: "Boys, a wave of sadness has passed over me not equalled in many a day, for I knew this man well way back in the days of which he writes. He was a man without guile or even the ability to deceive. His frankness, like his manhood, never forsook him. Upright and honorable in all his transactions, he was a man to cultivate, whether in the walks of private life or in the more rugged and tortuous paths to wealth and its acquirement. Then, to think of the wreck of such a character. I remember his marriage, and had misgivings touching it; the elopement; the fever that laid him low and his sudden disappearance after recovery. Now comes the strangest part of this tragic event in one man's life. The poison administered to his wife and Harkins did not kill them. Either through preparing it huriedly or forgetting the formula, whichever it was, it did nothing more than produce sleep and that only for a short time. A few years after the occurrence that destroyed a home, when the oil excitement had extended down the picturesque Allegheny River and new oil towns had taken the place of those on Oil Creek, there came one day to the leading oil metropolis of the lower country, this Colonel Harkins, broken in fortune, seeking again that which he had thrown away in dissipation and extravagance. Shortly after his return he became interested in a well that was showing up fine. While standing in the rig watching the drilling operations the well suddenly made a tremendous flow of oil and gas which ignited from the forge. He was warned to fly, but did not heed the warning soon enough and in a minute he became as a flaming torch. He attempted to reach a point of safety, but had taken only half a dozen steps when he stumbled and fell still being within the circuit of fire. Recovering himself, he bounded again to his feet, staggered a few steps and fell again, from whence he was dragged forth by two workmen. He was taken to a shack near by, where he gasped through

The Free For All.

A Night In An Oil Region Wildcat Boarding House.

By Arch.

"I SAY, boys, the joker's always trump. I'll take that pot."

"You're the luckiest dog alive. I'll be cussed if you heven't held the joker five hands out of six all evenin'."

The first speaker was a tall, broad-shouldered fellow, whose well developed form was pretty well displayed in a dirty red woolen undershirt with one sleeve cut out at the shoulder and a pair of tight-fitting trousers of coarse material. As he called out to claim the trick he raised his brawny bare arm above his head, the muscles in it standing out under the bare skin like great cables in their cork-screw winding around his arm. Then with a swift motion he brought his hard knuckles down on the rude pine table with a loud thump, spinning the champion euchre card to the centre of the board. His broad chest heaved under the red shirt after he had spoken with a half yawn, indicating that he had enough of the game. The muscles of his great thick neck swelled a little, down near the edge of the low yoked shirt, as he suppressed the other half of the yawn, and turned it into a good humored smile, which lit up his blue eyes and rough face, and elongated his heavy brown mustache a little.

The second speaker was a short, thick-set, stupid-looking fellow with watery white eyes, lantern jaws, and a short, round, red nose. He was dressed in shiny black clothes of an antiquated pattern, his white shirt was spotless, and his collar shone with the glossiest finish.

Besides these two there were three others who had been in the game. One of these was almost as big and brawny as the lucky holder of the joker, and dressed in much the same manner as he. The fourth member of the party was a stout little man, dressed well, but very plainly, in a neat fitting dark sack coat, vest and pants of the same material, the legs of the latter terminating inside of a pair of rather high-topped rubber boots. The wide collar of his blue shirt was half hidden beneath his heavy whiskers.

The last but not least among the players was a tall, thin, wiry-looking man, with piercing black eyes surmounted by straight, black eyebrows. Black mustache as straight from tip to tip as his eyebrows. High cheek bones, nose with a Roman hump and a Grecian end. This man wore rather loose-fitting grey clothes that showed wear, the legs of the pantaloons being carelessly stuffed into the tops of heavy, big leather boots.

The scene was a "wildcat" boarding house in a new oil field, the sleeping department of which was termed by the boarders the "free-for-all." A score or so of

other men, young and middle aged, lounged about the room reading, smoking, talking and laughing, most of them roughly dressed and bespattered with mud.

The first speaker, known to his comrads as Big Tim Boring, driller and contractor of oil wells, pushed his chair back from the pine table, arose, walked to the stove in the center of the room, ejected about a pint of tobacco juice on and about that useful piece of furniture, crossed over and peered out through one of the cracks between the rough hemlock boards of which the house was built. Through these wide cracks came the flickering rays of a huge natural gas light burning just outside, the flame roaring like the distant rushing of a mighty waterfall. The lurid flame which shot up 20 feet from the end of the gas pipe illuminated the roadway for many rods, and caused the tall forest trees to throw wierd black shadows athwart the fallen leaves.

When Big Tim again turned his face toward the assembled company his late companion in the game, who was attired like himself, looked up with the query: "All right, Tim?"

"Beam going at two-forty, Joe, steam howling, rope tight and jars clinking like glasses at a banquet of Congressmen," returned Boring.

"John'll soon be able to hide rope as fast as his boss," said one of the loungers, looking at Tim.

"John is a good one now," said Boring, "good as most of 'em ever get, an' I'll lay 500 even as we four on the Mary Jane well out there ken hide more rope every 24 hours than any other crew in this neck o' woods."

"You talk big money, Tim," said he of the shining clothes, "but I'll bet you $25 Hooligan drills through more rock the next six days than you an' John do."

"Go you," said Tim.

"Yes, an' I'll make it $25 more," chimed in Joe Gripp, who was Tim's tool dresser.

"Say, Shorty," said Tim, coaxingly, "make it fifty: I'd as soon put up five tens an' Mr. Frontley, here, owner of the Mary Jane, shall be referee and stake-holder."

As Tim spoke everybody looked toward the stout, plainly dressed man in the rubber boots, who was Mr. Hunter Frontley, the well known "wildcat" operator, always in search of new territory, who had made a dozen princely fortunes from lucky strikes, spent as many in the indefatigable search for other fields, and was the pioneer of this present development where the scene took place.

Mr. Frontley was about to assent to the proposition, but seeing some dissatisfaction portrayed on the face of the short, thick-set man, said quickly: "No, I prefer not to act, being interested in one of the wells. Better get some one else, Tim."

"Right, Frontley," said the tall, thin, wiry man. "Give the stakes to me; I'm wholly uninterested."

"Yes, give 'em to Slim Jim," chorused the assembly. "There's no better judge, an' he's safe as a bank."

The money was thereupon handed to Slim Jim, who placed it in a long, thin, flexible pocketbook and said: "As I've no shooting to do to-morrow, I'll just drop 'round with my torpedo line and measure up the holes, as a starter, and see fair play right through. Then I'll measure 'em up again in a week, and give the money to the side that has drilled the greatest distance. Now, Boardman, that is all right, is it? All satisfactory, Boring?"

The principals assented, and so the bet was made, after which

"Shorty" Boardman, the landlord, retired to get off his good clothes, donned for a trip he had just made to the nearest town for supplies, another party drew up to the table to shuffle the dirty, well-worn cards and conversation became general The favorite topics at the start related to the work being done in that field, and all the other producing districts from which the various persons present had recently come, the prospects of the future, the features of the market and so on. Gradually they lapsed to reminiscenes of fortunes made and lost in producing and handling the slippery fluid, and from that to an assortment of stories touching a variety of topics, many of them not calculated for cold type.

The great gas light without burned brighter as the night grew darker. A few stragglers slipped off up stairs to bed. The maid of all work was going to and fro, between the kitchen precincts and the sitting room where the men were, carrying into the latter a variety of lunch pails, large and small, the cover of each being capped with a little tin cup and the slip on the side of each holding a table knife, handle upward. Well filled pails they were, with tea or coffee in the lower part, and meat, bread, potatoes, butter, pie and cake in the upper portion, for the drillers and tool dressers who went to their work at midnight were imperative in their demands for a good meal at daybreak and the teamsters and rig builders who went to their work just after breakfast, were apt to feel hungry by noon.

Perhaps half a score of pails had been ranged in a row along one wall of the room when three mud-bespattered men entered. Two of the new arrivals carried heavy valises, which they soon deposited in a corner and began a general hand-shaking with the loungers in the room, as a guarantee that they had met most of them in other oil fields. They were evidently no novices.

The third member of the new party stood all this time with a small traveling bag, in his hand looking around at the motley company, at the row of pails along the walls, and at his muddy shoes. The expression of his face betokened no great satisfaction with either his personal condition or his surroundings. One of the men who had come in with him, having finished his hand-shaking and greeting, dropped into a vacant chair, elevated his boot-heels to the top of the stove, fished a little black pipe out of his pocket and proceeded, very comfortably, to fill it. The other was about to imitate his example, but as he turned, his eyes fell on the gentleman standing just inside the door, holding his traveling bag in his hand and looking ruefully from the mud splashes on his clothes to the row of lunch pails, and then back at his muddy feet again.

Deeming some kind of introduction necessary to the stranger, he cleared his throat a few times partly to collect his thoughts for the unusual ceremony, and partly to attract attention, and then said: "Gentlemen, this is Mr. Newcombe, a stranger, who wants to see the oil country, as he told me an' Bill on the way out here. Mr. Newcombe, I make you acquainted with Mr. Frontley, a well-known petroleum producer. Mr. Boring, the champion driller—being a driller myself, I know—and a good fellow. Mr. Gripp, the best of tool dressers. Mr. —Mr.—hum—Mr.—ha"

"Slim Jim," prompted Big Tim in a stage whisper.

"Mr. Slim Jim, torpedo shooter; one of the coolest heads in the busi-

ness, nerves of iron, and never fails to get the shot off at the very spot in the sand you want it."

The introductions thus far had been duly acknowledged, but the stranger was evidently rather embarrassed when the tall, thin, wiry man frankly stretched out his hand and as he took it he muttered something about not hearing the name. His embarrassment was not lessened when the torpedo agent said "Slim Jim" very distinctly.

At this juncture Boardman entered and being presented as the landlord, Mr. Newcome lost no time in asking if he could be accommodated with a room and bed that night.

"Well," said Boardman slowly, "no, not exactly. You see, I'm pretty full an' the best I ken do fer you is to give you a shake-down on the dining room table an' another on the floor for t'other two."

Mr. Newcome looked a little dismayed at the prospect, and Slim Jim at once offered him the use of his bed for the night, if he would like that better. After some parley and protestations on Mr. Newcome's part that the table wou'd do for him it was finally arranged that he should occupy Jim's bed. Supper was provided for three, and shortly after they had done Mr. Frontley conducted Mr. Newcome up the stairs by the light of a small hand lamp with a badly smoked chimney.

The gas light without threw rays through the chinks in the outer wall and by the time they had reached the top of the stairs Mr. Newcome could see about him well enough to distinguish two rows of beds, eight in a row, on either side of the room. He was also enabled to see that the beds contained two men each, excepting two that had but one occupant. As he stared at the numerous pairs of heavy boots and piles of clothing on the floor between the beds, and glanced about at the array of clothing hanging against the walls, he became aware that the house only contained one room up stairs.

Mr. Frontley pointed out one of the beds, which had only one occupant, as Slim Jim's resting place, and turned to the other himself. Newcome simply stood looking about with the air of a man who had got into the wrong pew and did not know exactly how to get to the right one, and, of course, he soon became the observed of all the lodgers who had been awakened by his entrance, and that of his immediate predecessors, Big Tim and Joe Gripp.

One of the burley forms in a bed near the stairway raised its head from the pillow, blinked awhile at Mr. Newcome, and then said gruffly, "I say, neighbor, can't yer find yer bunk?" Another head popped up in the farther end of the room and a voice came from that quarter, saying: "Looke here, mister, we can't stand three in a bed, an' this house's been full for more'n a week."

Mr. Frontly informed the last speaker that the newcomer was to sleep in Slim Jim's place, and then whispered to the latter to make believe he felt at home and get into bed as quickly as possible.

He took the advice and turned in with all possible dispatch while Big Tim smoothed matters by remarking that he "reckoned the stranger had a right to count the lay out if he wanted to, seein' as it was his first night in the place."

But Mr. Newcome could not sleep. The bed was hard and had a mouldy odor and he imagined that the crazy board frame which served as a bedstead was ready to break down at any moment. And when the

chorus of a score of snores, high, low, loud and long, welled up to the roof, there being no ceiling to hide the view of the rafters, sleep became an impossibility. Once he did doze a little, but a snort from one of the chorus, so loud that it seemed as if it would displace at least one shingle of the roof, brought him up with a start, and he sat up in bed. Several others also got awake and one of these was the man who drew the line at "three in a bed." The snort was repeated and the objector, picking up one of his heavy boots, shied it into the snorter's bed. The thick, hard heel came down on that worthy's chin and he started up with a howl that awoke all the rest. He sat up. Then he saw Mr. Newcome also sitting up, and concluded that he must have thrown the boot, so he picked it up, took good aim, and sent it flying at Newcome's head. The missle fell below the mark and brought up with such force against the stranger's chest that he went back on his pillow abruptly. The obnoxious snorer was still very wroth, so he picked up one of his own boots and was about to launch it at Newcome, when that gentleman's bedfellow leaped out on the floor, threw up his hands, and cried:

"For God's sake, Jackson, don't throw. Slim Jim has 300 pounds of nitro-glycerine under this bed and if ye'd happen to hit a can of that we'd all go to glory together, an' there wouldn't be a piece of this house left big enough fer kindlin' wood."

Mr. Newcome was out of bed in a moment, almost trembling with fright. "What!" said he, "dynamite under the bed! What do you mean? That any one could be so reckless as to put 300 pounds of deadly explosive under a bed! I think I'll go down stairs."

"No, you won't" said the snorter, "you'll git back into bed an' let up on yer monkey business, er I'll knock daylight out of you. I've hed enough of this banging boots at my head."

Mr. Newcome got into bed again, but the man who had thrown the boot at Jackson got up and delivered himself of a characteristic sentiment. "Mr. Snorter," said he, "thet fellow didn't throw no boot, but I did. Some things I ken stand; some I can't. I can't stand three in a bed, nor I can't stand a big duffer saying 'kowpf' in his snore. A plain snore's all right; but d—d ef I ken stand the fancy teches. Now, Jackson, ef yer want to throw boots er fight, count me in, an' let t'other fellow alone."

"Confound it boys, shut up and go to sleep," said Big Tim. You've had jaw enough. If you don't want to sleep, keep quiet and give the rest of us a chance."

This sentiment was echoed by everybody but the belligerants, and they finally concluded it was the part of wisdom to concur. So quiet reigned for a little while and the chorus was resumed. Mr. Newcome had enough of the free for all wildcat boarding house, so he slipped out of bed, gathered up his clothes and was making for the stairs when Jackson woke up, jumped out on the floor in front of him and said: "Here, old fellow, don't be too soon. What hev ye stole now? I guess you'd better be searched before leaving."

"I haven't stolen anything," retorted Newcome indignantly. "I merely wanted to go down stairs."

"Well, ef yer honest ye'd better git back in bed an' stay there," growled Jackson determinedly.

Mr. Newcome went back, but as he was climbing into bed his bare foot came in contact with a tin can

in such a manner that it made his flesh creep. He dropped himself into his place so hastily that the crazy bunk creaked, and his bed-fellow growled out: "You'd better knock the bed down on them cans," and then all was quiet again.

At midnight Boardman awakened them all by loud calls at the foot of the stairs. Newcome's bed-fellow and about half of the other men in the room got up, dressed and went out. Then, in about an hour, a troop of others filed in, took off their clothes, which were spattered with mud all over in a way that told plainly they had been handling the sand pump on some drilling well, and went to bed. Mr. Newcome, of course, got a new bed-fellow, but he was glad Jackson had gone out. Boring and Gripp had gone, and their bed was occupied by John and his tool dresser, who run the afternoon tour on the Mary Jane well.

Toward morning Mr. Newcome got a little sleep, but he was glad to get up at daybreak and go downstairs, though not in the least refreshed by his night's experience. He was rather inclined to take his grip and his departure at the earliest practicable moment, but when breakfast was over he walked out with Mr. Frontley to look about, at that gentlemen's invitation, and before they came back to dinner they had progressed so well in mutual acquaintance that Newcome had accepted the proffer of a bed in Frontley's new office, the furniture for which had just arrived that day.

Slim Jim measured the wells according to agreement and the race was begun. At the supper table he informed Mr. Newcome that he had a well to shoot next day, so if he wished to see that interesting performance he could be on hand.

After dinner the next day he carried round six cans like those under the bed up stairs, explaining that those had been empty. Big Tim volunteered to carry two of them, Joe Gripp took two more, and Slim Jim the remaining two, while Frontley, Newcome and a couple of the loungers bore the line, reel and long tin shell.

They walked to the well. Slim Jim poured the nitro-glycerine into the shell, while Tim fastened the reel to the crank on the belt wheel shaft. The cap was adjusted, the line attached to the shell, and it was slowly lowered into the hole, Jim standing over the opening guiding the line as Tim unreeled it.

The others sat outside watching until Gripp leaped suddenly to his feet, shouted, "She's going to flow!" and started to run, closely followed by the others. The line had slackened in the shooter's hand as Gripp jumped up, and Slim Jim had braced himself back half a step from his former position. When the fleeing ones paused and looked back the shooter was still bending over the hole, his tall, thin, wiry form bent as though for a spring. The black eyes were evidently peering down the orifice, though a cloud of gas and spray oil was being projected from it into his face.

"He's going to catch it," exclaimed Gripp, and the words were barely out of his month when the shining tin shell with its deadly contents shot up with frightful rapidity.

The long arms closed in, the long fingers wound round the shell, and the thin, wiry form braced itself more firmly on the derrick floor. Gripp had spoken truly, he had caught the shell in its upward flight though the slightest slip would have been certain death to him there being enough of the powerful compound in the shell to have re-

duced man and derrick to fragments. He held the shell until the flow subsided, lowered it again to the bottom, dropped the "go-devil" weight and exploded it successfully in the oil rock.

Newcome was amazed at the wonderful burst of oil, sand, pebbles and all that poured in a mighty column far above the derrick top as a result, and in answer to his inquiries Gripp and Frontley assured him that shooters were sometimes compelled to catch shells, as any attempt to run away was worse than useless, and Slim Jim modestly admitted that it was not the first time he had done it himself.

Mr. Newcome staid for a week, saw Big Tim win his bet from Boardman, witnessed the erection of four more boarding houses, three saloons, a dance hall, five stores, and about 50 derricks. When he left for his city home he invited "the boys" to call around and see him, and assured Mr. Frontley that he never could forget his night spent in the free for all boarding house, though Mr. Frontley asserted that in any new oil field he could find its prototype.

When Bradford Boomed.

And When the Man of the Hour Was a Workingman--Retrospective Reflection.

How rapidly the years pass and what changes they bring! It seems only a short time ago when the lines were first filled with rich, gaseous Bradford oil, forced from the underlying rocks by the pent-up energy of geological ages. And when the oleaginous floodgates were opened what an overflow of liquid fortune there was!

The Bradford field is still producing oil, but the output, now, in comparison with the production then, is in the ratio of a brook to a river. Bradford, in the lapse of years, has materially changed. Its inhabitants, likewise, are different to those of the past. That great multitude of oil region people who were here in the later 70s and early 80s were of types peculiar to booming oil towns. They represented many varieties of the human species. They came from far and near, attracted by stories of Aladdin-like opportunities here to be found. Many of them came from the older oil fields—"down the creek," or "down the river."

Others were of the "tenderfoot" kind from the farms, forests, villages and cities. They overcrowded Bradford and went out into the numerous hamlets, which, in rapid succession, sprang up all over the Northern field. They were here to do a great work and they did it—each in his own way assisting in the big task on hand. They transformed Bradford, a quiet, diminutive

backwoods village, into a thriving, bustling city.

There were drones then, too, as there always will be. These, instead of working on the wells, the pipe lines or the tanks, worked on the credulity of their fellowmen.

But the great majority of those who formed that grand army of industrial achievement were men of the right sort.

The man of toil was then in demand. He had no union, no regulated wage scale; but his wages were large. There were no strikes here then except oil strikes—and of these there were plenty. Dry wells were few in Bradford's prolific region.

The oil field worker was the man of the hour. Yet he boarded in an overcrowded hemlock habitation and was not a stickler for luxuries. The long dining room table was not overburdened with tempting viands but the boarder was hungry and took what he could get without finding serious fault with the wearied landlady and her assistants. If he worked "on tour" he would not be surprised to find that the hard bed on which he occasionally slumbered and dreamed of "Home, Sweet Home" also was required to do a "double turn." The other fellow who occupied it during the opposite "tour" might have been a plutocratic producer or a haughty contractor—it didn't matter. In new oil fields all ranks were leveled.

And when Saturday, or pay day, arrived and the workers came to town, they all had money. The proprietors of the hotels, vaudeville theatres, poker rooms and concert halls didn't have to draw the line between employer and employe. All were welcome. All had the price. Nobody cared for expense.

The broad-shouldered young man with blue flannel shirt, thick-soled boots and black, soft hat, adorned with gray sand-pumpings, might have been the owner of half a dozen wells, or he might have been an ex-farm hand who had learned how to dress tools in Toad Hollow. It was all the same. "Bring us another" was the order of the day—and night. No curfew bell tolled the hour. Nobody wanted it told. It was a wide-open town with drinks, meals, adventures and hilarity at all times available.

There were no electric lights then, but along the streets, in defiance of the passing breeze and the darkness sputtered numerous gas flames from "T" shaped, upright iron pipes. And out on the hills hundreds of blazing beacons of the same kind showed where the wells were, and consumed enough gas to start in business a Pittsburgh syndicate in these latter days of frugality, Welsbach burners and meters.

The men who did things in Bradford's oil boom period were a spirited, cosmopolitan aggregation of good fellows. Some of them juggled the temper screw, while others pounded the big steel bitts. Some were rough riders who never expected that there would some day be a good roads movement. They drove strong horses up hills and over rocks, with supplies. And then there were those other teamsters whose wagons contained enough nitro-glycerine to blow Bradford into Cattaraugus county. There were also the men who welded big stems and who made jars in the oil tool shops; and those who ran the over-loaded, narrow guage trains; the horny-handed ones who built the great iron tanks; the toilers who wielded axe or shovel, and the hundred and one types of hustling humanity to be met with here, each played his part effectively.

But not one of all these served a

more useful purpose than did the men who constituted the pipe line contingent. They were the men who laid the lines, who ran the pumps, who gauged the tanks and who made it possible for the producer to turn his product into cash the moment it was in the line.

They were of the United Pipe Lines and a credit to the community. In Bradford they had the finest volunteer hose company to be found in a day's walk—and the town always felt a thrill of pride when it saw them on parade.

Yes, those were piping times and the men in charge of the pipes gave the oil fraternity many good 'runs' for their money.

But that great army of industrial exponents, representing the varied factors entering into a stupendous oil boom, have nearly all vanished from the scenes of their former activity. They were scattered far and wide. Many have gone down and out in life's strenuous struggle. Others have been fortunate and have grown wealthy and entered society and politics. Some are in Kansas. A large number of the Old Guard may be found in the multitudinous oil producing spots and places of the "Southwest." Oklahoma just now is the stamping ground of not a few of the former Bradfordians. They are in Kansas, Indian Territory, Texas and Louisiana.

Some of them are at present endeavoring, in their efficient way, to make the Pipeliners' 30th annual picnic and reunion at Conneaut Lake a complete, gratifying, fraternal success.

But no matter where they are, or who they are—**Here's to Them!** May they long live to enjoy life in whatever station—pipe line or otherwise—they may occupy.

FOREBODINGS.

"I don't believe I'm more superstitious than the next man," remarked the retired merchant, "but I have faith in presentiments, because I have often known them to be realized. For several days I have had a presentiment that some calamity is going to overtake me. It makes me feel uneasy."

"Presentiments be hanged!" snorted the hotel keeper. "The trouble with you is that you have no sane and useful occupation. You ought to be out in the cornfield with a pair of roan mules and a red wagon, husking the golden grain, instead of loafing around here talking about your doggone presentiments to an elderly landlord, who has troubles of his own, the gentleman with side whiskers, who occupied the second floor, front, having jumped his bill. People who put in their time loafing and yawning and boring their friends, always have presentiments of evil, and I'm always glad when their presentiments come true.

"Several years ago I made a big bunch of money all at once. I happened to buy a tract of land just outside of town for a small amount, and then a boom hit the town, and promoters were looking around for land on which to plant an addition, and they offered me a fat roll for

my land. I jumped at it and had all my pockets full of money. I felt too rich and independent to run a hotel any longer. I wanted to wear a plug hat and a white vest and stand in front of the Steenth National Bank, looking as though I owned the town. My wife, who has more sense in a minute than I ever had in a hundred years, wanted me to stick to my business, just as though nothing had happened, but I told her to avaunt. A man generally does ask his wife to do an avaunting stunt when she hands him good advice.

"Well, I sold out my hotel and stood around in front of the bank and talked about Rockefeller and Pier Morgan as though they had been educated in my father's woodshed. I enjoyed it for a few days, but pretty soon I began to have presentiments of disaster. I had invested a lot of my money in a western gold mine, as I felt that it added to my importance to be able to talk of my mining interests, and I began to have gloomy forebodings that I was going to lose that money. And it was a caution how those forebodings hit the bull's eye. I lost every doggone cent I had invested, for the mine proved to be a frame-up, designed for just such suckers as yours truly. Then I soaked my plug hat and turned the pictures of Morgan and Rockefeller to the wall and got back into the hotel business, and quit having presentiments.

"Just as soon as a man goes out of business and takes to polite loafing his troubles begin. He has all kinds of plain and fancy presentiments and worries and ailments. Now, there was old Hockaday, who was planted last week. He retired from business five years ago, and at that time you couldn't ask to see a heartier man. He looked as though he could lick the whole beef trust. But after he had been loafing a few weeks he found that he had a green fur on his tongue, and somebody told him that his liver was out of whack. In the absence of anything sensible to occupy his attention, he began worrying about his doggone liver and he bought all the drugs and medicines in the United States, and went to sanitariums and hired doctors, and finally his liver did get him and he sleeps with his fathers.

"Had he been in business, he wouldn't have paid any attention to his idiotic liver, and would be alive today. If there's one thing sure in this world, it is that a man can worry himself to an untimely grave if he goes to work in earnest. Years ago the doctors told me that I have the punkest heart in the United States. They said I was liable to keel over at any moment, and that I couldn't possibly last two years. If I had lost all interest in my hotel, and just sat around brooding over my heart, I'd be in the boneyard now, but I paid no attention to my heart and it's in business at the old stand, and I have no intention of cashing in as long as the hotel business is as good as it is now.

"Find something to do that will keep you hustling all day and you won't have any more trouble with your silly presentiments."

Shreveport, Louisiana.

A Red River City With a History--The Discovery of Oil Gives Prestige--A Negro Narrative.

By J. L. Hunter.

SHREVEPORT, the capitol of Caddo Parish, Louisiana, is situated on a stretch of rolling land on the right bank of the Red river, with a population exceeding 40,000, with a percent in favor of the whites. One hundred years ago, the land upon which the business section of the city now stands was a cotton plantation and said to be one of the most productive in the Red river valley.

Naming the Town.

Among the early steamboat men that navigated the Ohio and Mississippi rivers was Captain William Shreves, who owned and operated a line of boats between Pittsburgh and New Orleans, making occasional trips up the Red river, stopping at the different plantations, to take on cotton, grain and other marketable products. On these trips he seldom went farther up the river than the present site of Shreveport, owing to the treacherous sandbars that were ever changing by the swift current.

Captain Shreves was not only widely known, but had the confidence of every planter along the river. His stories of the wonderful richness of the soil through which the river cut its way in northern Louisiana, spread through the more southern states, and men of means came to see for themselves and being satisfied with the country, purchased plantations, brought their slaves and engaged in growing cotton, corn and raising stock, it being said that up to the commencement of the civil war this section of Louisiana led all southern states in yield of cotton and grain.

As a natural event, a settlement sprung up at the head of navigation and was given the name of Shreveport, in honor of the old river captain, William Shreves.

Prior to the firing on Fort Sumpter, Shreveport held the distinction of being one of the noted distributing centers for interior supplies for northern Louisiana and eastern Texas. Dallas, Austin and San Antonio, in those days, were dependent on Shreveport for both family and farm supplies. It was not until the ending of the Civil war which led to a reorganization of the south, and led to the building of long lines of railroads, bringing in touch the once isolated settlements with the manufacturing centers of the north, did Shreveport lose its prestige in this line.

Gateway of Supplies

From 1861 until the fall of the confederacy, Shreveport was a principal point on the Red river for shipping cattle to the different con-

federate army supply posts, many thousand heads were driven to this point from the Texas plains and shipped down the river, or ferried across to be driven over the country to Vicksburg. In order to safeguard Shreveport, which meant a great deal to the Southern confederacy, a large force of men were stationed here under the command of General Kirby Smith. It was the fact of it being a base for shipping supplies that led General Banks to undertake his Red river campaign. Coincident with this, there is one story the older residents of Shreveport delight in telling to a northerner, which runs as follows:

"When word came to Shreveport that General Banks at the head of a large army was on his way up the river, the garrison, in view of giving him a warm reception, selected a site on the right bank of the river two miles below the town and erected earthen works, but when completed they found to their dismay they had no guns to man it. The redoubt commanded the river for a mile either way and the talk among the soldiers who constructed it was they would blow Banks' transports into the next parish. The outlook for Shreveport was gloomy indeed. It must surely fall. It was then that some one suggested that they would give the Yanks a bad scare anyway by manning the fort with wooden guns, which was done. Although the history of the Civil war fails to chronicle the following, it is told that when Banks learned of a most formidable fort barring his way up the river, he concluded to let little old Shreveport remain in the possession of the confederates."

During what is known as the "Carpet Baggers" era, which followed the close of the rebellion, Shreveport was the scene of bloody riots between the two races, owing to the negroes being given the privilege of voting and holding office. Imagine, if you please, a black man, recently relieved from the bonds of slavery, and with no education whatever, holding official positions of the commonwealth. Is it any wonder the white citizen of Shreveport and of Caddo Parish banded together for the purpose of protection against what was in that day, a woeful wrong. Too late, the hungry politicians saw what a hornets nest they had uncovered and they could only sit back and watch the events that followed. Making Shreveport headquarters during my sojourn in northern Louisiana, I gathered from a reliable source facts pertaining to the reign of terror following the granting of franchise to the negro.

Around the little wooden court house, later supplanted by a magnificent stone and brick structure, scores of battles were fought and hundreds slain, the struggle continuing until the decendents of Ham were forced to curb a desire on their part for holding office. But that was in the long ago. The progress of half a century has almost blotted from memory the stirring scenes that transpired in this Red river town, that 75 years ago consisted of a long wharf, a row of one-story warehouses and a few scattered residences on the higher ground. Today, gazing from the upper story of the Commercial hotel, you look down upon miles of paved streets lined with beautiful homes, modern business blocks, the whole given a commercial coloring by the smoke of factories in the background.

That Shreveport leads in progress among the cities of Louisiana can readily be seen by the observant traveler and why? you may ask. The answer is "Oil," the magic

wand that has transformed workshops into great factories, towns into cities, and increased the wealth of nations.

Following the course of the river for a distance of 100 miles have been discovered fields of petroleum the principal ones being Caddo, Oil City, Moorinsport, Crichton and Lentzburg. The two latter lie south of the city within defined territory, principally confined to the Red river valley. Shreveport being the base where field supplies can be had, the majority of the companies operating in the field make the city their headquarters, a number buying property and erecting beautiful homes where, as the darkey said, "De orange blossoms grow."

A Visit to the Oil Fields

As the business I was engaged in led me to visit the oil fields, I boarded an early train for a two hours' run down the Red river, where recent development had brought in a number of flowing wells of more or less calibre. It was a delightful morning, but the sun, which hung in the eastern heavens like a ball of fire, told the story that we might expect a scorcher, which was fully demonstrated before night. The railroad skirted the winding stream the entire disance, giving the passengers a fine view of the valley, in many places in sore contrast, so I was informed, of that "befoh de wah." My companion chanced to be a confederate soldier, a member of that famous regiment, the Louisiana Tigers, who pointed out various places of interest enroute.

As we rounded a sweeping bend in the river, he drew my attention to a weatherbeaten, two-story mansion, surrounded by a grove of cottonwood trees, while farther back, at the base of a hill, were a number of log huts—negro quarters in slavery days. "The Morrison plantation, and one of the most productive along the river before the rebellion," said my companion, adding: "I was well acquainted with Colonel Morrison, who was killed at the battle of Gettysburg during a charge made by the Tigers on Cemetery Hill. Lord, but they did slaughter us that day."

"The place looks sadly in need of repairs," I remarked.

"Yes, that is too true. Speaking from an agricultural viewpoint, the south has not kept pace with the west in this line. The close of the war left many once fine plantations without a master mind. Take the Morrison plantation, for instance. I can remember of seeing fields of cotton, grain and broad meadows, where now grows weeds and briars. Morrison left a widow and three children—two sons and a daughter. His wife died of a broken heart shortly after he was killed. With the exception of two old darkeys, his slaves left. The children became separated, the farm was sold for debt and the Morrison plantation of fifty years ago is but a fading memory."

A two hour run and our train pulled up at Lentzburg, a typical oil town pure and simple, even to a small lake of water in front of the principal business block where half a dozen Louisiana razor backs were enjoying their morning bath.

The town lies on the left bank of the river, a stream that has proven to be a menace to operators and also to a number of the residents, owing to the cutting away of the banks by the swift current during flood stages, and oil operators have spent thousands in cementing the banks in order to save their wells. The trip led through what is known as Gusher Bend, at that time the principal producing pool of the Crich-

ton field, where we found considerable new work in progress. Here we met a number of eastern boys, but for wonder, there were none from Venango county.

The following day I took in Moorinsport, a small oil settlement on the banks of a lake, picturesque to that degree that one is entranced by its scenic beauty. One hundred years ago, so runs the Indian legend, a dense forest covered the broad expanse of territory that now comprises the lake. In one night's time the forest disappeared and the awe-struck savages, from the surrounding hills, gazed in silent wonder on the serpentine stretch of water, that but a few hours previous comprised a portion of their hunting ground. A feature that attracts the eye of the traveler is in the operation for oil in the lake, which is accomplished by driving piling well out in the water, on which is built a runway of sufficient strength to carry the machinery for drilling. In most every instance operators have been amply repaid for the time and money expended by so doing, as a prolific pool of petroleum was found to underlie the lake bed in the vicinity of the town.

Our next stop was at Oil City, an oil center that in its younger days compared favorably with the once famed Pithole of Pennsylvania for debauchery and crime. Here we found a smattering of eastern boys who had found their way down to this mosquito country in search of wealth.

Among the attractive oil towns visited while in Louisiana, was Vivan, an up river village of promise, where reside a number of operators who, together with staid business men, set themselves to make the settlement a place to be spoken of with pride. Already a number of fine business blocks have been erected, which has been capped by the completion of a $75,000 high school building.

Uncle Dan's Story

Having been informed that the negro element of Shreveport cut no figure in the municipal affairs of Shreveport, that election day is the one day of the year when Sambo hounts the 'possum or gets better acquainted with Dinah, to verify the same I dropped into a cleaning and pressing establishment presided over by one "Uncle Dan," whom I found to be a rather intelligent darky. The conversation leading up to the voting problem, I enquired as to his political views.

"Dat am suthin' I nebber bodder my head about. De fact ob de matter am dat der hasent a darkey voted in dis section ob Louisiana foh de last thirty yeah. I member de las time de darkeys undertook to vote, an' a worse scared lot of blacks nebber hoed cotton, an' dat am a fact."

"Would you mind giving me the story?" I asked.

"If you'll wait 'till I cross de street foh a pitcher ob water, I'll gib you de story, foh it sure was a laughable affair an' dat am a fact."

In a few minutes the darkey returned and taking a seat on a stool, began: "Thirty yeah ago dis fall I was libin' wid my folks out in de country fifteen miles east of Benton, a town up de ribber aways. Libin' wid us was my grandpap an' 'cross de field libed Uncle Noah Johnson an' Aunt Liza. We hadn't much to come and go on dat fall I 'member. One day a White man come out dat way a lookin' up de colored vote foh de 'publican party an' gibin' out presents. He gib my pap a bran new pair of brogan shoes. Pap was mighty proud ob dem shoes, bein' it was de first pair he'd

had foh a yeah or more. I don't jist 'member what grandpap an' Uncle Noah got, but I does 'member that on 'lection mornin' dey was about two hundred darkeys assembled at our place, ready to start to Benton to vote. We had a dun colored mule an' bein' grandpap was nigh onto seventy yeah old he was giben de mule. I can see grandpap dis very minute sittin' on dat mule, ridin' ahead ob de others on der way to Benton to vote foh de first time. When arribin' at Benton grandpap tied de mule to a fence near de votin' place, a three story tobacco barn, where more dan a thousand darkeys were waitin' foh de 'publican feller to come an' show dem how to vote. For an hour or moh dey stood around waitin' 'till pap got mighty uneasy an' was wishin' himself back home, when a voice called out: "Line up," followed by de crack ob a pistol an' lookin' up dey seed ebery window ob de votin' place bristlin' wid guns an' pointed right at em. Was dem darkeys scared? Pap sed he felt de wool clean leave his scalp an' it werent no time afore de people ob Benton seed de biggest leg contest ebber pulled off in Louisiana. Sure as you is settin' in dat chair, grandpap was so bad skeered he piled onter the back ob o two year old steer that was munchin' grass 'longside de mule an' nebber node de difference 'till it frowed him off in a corn patch forty rods down de lane. You see de darkeys run which ever way de was lookin' an' bein' dat Uncle Noah was facin' west, he lit out and nebber stopped 'till he hit de Texas border, twenty mile away.

"Grandpap was de first to git home an' was so near tuckered out we had to put him to bed. Pa didn't come till after night an' sich a lookin' feller you nebber seed. He'd waded swamps an' tore through briar patches 'till he hadn't more'n enough close left on him than would make a rag doll baby an' he'd ruined dem brogan shoes entirely. Aunt Liza cum ober to our house sobbin' an' cryin' an' sed she node Noah was killed and like as not he was buried wid his face to de east an' wouldn't git up at all ressurrection mown. A few days later Uncle Noah appeared, havin' stopped wid a colored fambly in Texas for three days, fearin' to come home. Dis was de last time de colored people ebber tried to vote in dis here locality."

DEAL ME THE WASTE

(By D. Bogan)

Old Crude Oil, you're a gamblin' game;
The cards you deal are a measly shame.
Some draw an ace, and some draw a deuce;
Deal me the waste, and I'll turn loose.

Old, Crude Oil, you're biased and bold,
To deal one a gusher, and one a dry hole.
Some are made rich, and some made sad;
Deal me the waste, and I'll be glad.

Old, Crude Oil, you're a greasy game;
You're slick as an eel, and seldom tame.
To some you're good, to some you're bad;
Deal me the waste, and I won't get mad.

THE WALKING BEAM.

(By Sandy)

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Items of Interest.

Mose Shuck an' Till Mook were married last week at the county seat. This makes the third time Till has been married, one husband bein' killed by a tree fallin' on him while cuttin' it down an' the other dyin'. We would like to say something appropriate about Mose, but as he was arrested fer sellin' whiskey without a license, an' mighty poor stuff at that, we think Till had better stayed single for a while yet.

Since our last issue we have increased our circulation seven bonifide subscription. This goes to show that the Walking Beam is appreciated by them that read it. We are talking of givin' some kind of a premium in order to induce people to take the Walking Beam more frequently than the do, an' would like our subscribers to suggest something for us to give. Don't suggest anything that will cost money or we can't do it.

UNCLE BILLY JOHNSON IN OKLAHOMA

Meets with a Friend, and also with the Loss of His Carpetbag—Something Doing Every Minute.

Well, here I am in Oklahoma, one of the dadburndest big outdoor places memory recalls in all my

travels, an' I have traveled most all over Cattaraugus county in my time. To begin with I arrived here jist about fagged out, owin' to not providin' myself with a berth to sleep in, which I attribute to the railroad company not informin' me they carried bedroom suits on the train, so I sit up all the way here, but I enjoyed myself lookin' out of the window at the sights in day time, an' readin' a book which I bought from a feller on the train, called "Buffalo Bill," a mighty interestin' yarn, at night, 'till arrivin' at Cincinnati, when I fell in with one of the most friendly an' entertainin' men I ever met, who said his name was Dave Tookit, an' when he found out I was from Posey County, Ingeanner an' was on my way to write up the oil news for the Walking Beam, he got friendlier than ever an' said he was heavily interested in oil in Oklahoma, owned a twenty-roomed house in Tulsa, an' said I was to board and sleep with him for nothin'. "Uncle Billy," sez he, as he helped himself to the hind leg of a fried chicken I had along for a lunch betwixed meals, "Remember when you are in Oklahoma you are not in Posey County, Ingeanner. It's mighty unhealthy out there at the present time, the prevailin' ailment bein' cased by bad water, an' the best known antidote bein' a wine glass or two of a remedy called William Thomson when you feel like takin' it, but you have to be mighty sly about dosin' yourself with it as all the doctors are against its usage, as it hurts their business. In fact," sez he, "They've past a law to jail any person or persons caught bringin' it in the state," sez he. Dave insisted on me providin' myself with some of it to keep from gitten sick an' havin' to go to the hospital, that when we arrived at St. Louie, me an' him went to where they sold William Thompson in bottles an' provided myself with six bottles, me payin' for it an' puttin' it in my carpetbag under my seat in the car. Dave warned me not to even look towards the carpetbag for fear some one might suspect I had it an' tell the doctors at Tulsa an' have me arrested. Well, me an' Dave talked of this thing an' that thing until we got as sociable as if both of us was twin brothers, until they turned the lamps partly out, when Dave sez: "Uncle Billy, you doze off an' I'll watch the carpetbag," which I did, an' when I woke up Dave was nowhere about, an' I found a note pinned to my coat which read: "Dear Uncle William: Sum thief stole your carpetbag. Am on his trail; will meet you in Tulsa."

I won't say its not every feller you meet that is ready to help one in distress like Dave, for besides the antidote, the thief had tooken a pair of socks an' half a cooked chicken an' some notes I'd writ on the way fur the Walking Beam. I was relieved somewhat by knowin' Dave would overhaul the miscreant an' meet me in Tulsa, where I arrived some hours later to find it as Dave said: covering a passell of land an' filled to overflowin' with oil men, females an' Injuns, an' a more friendly lot of bein's I never seen in my born days. I hadent more'n got off the cars before a dozen or so of fellers met me with one an' two horse vehicles an' mobiles, to take me whereever I wanted to go, but bein' as I dident want to show partiality, I thanked them savin' I'de hang 'round the station a bit to see if my friend Dave would show up, which I did to fal' asleep on a bench when I was wakened by some feller savin': "Wake up, this isent a bunk house," an' stand-

in' 'longside me, about six feet tall with brass buttons on his wammus and carryin' a club, was a feller, who asked me who I was. When I in formed him that I was Billy Johnson of Posey County, Ingeanner, an' associate editor of the Walking Beam, he said that he didtent care if I was Commodore Perry of the crown pulley, to pull my freight out of the station. I 'lowed he meant my carpetbag, an' explained to him that I was expectin' Dave with it every minute. He sez: "Uncle Billy, I's chief of police an' if you wait 'till Dave comes around, the English an' Germans will be eatin' dandylion greens out'n the same pot," sez he. I axed the chief if it were as sickly as Dave told it was. He sez: "Uncle Billy, we laid out a graveyard 11 years ago, but not hevin' any use for it, we leased it to a Kansas fellar last spring fur a watermelon patch," sez he.

When a boy in Cattaraugus county, afore I came to Posepy county, my pap told me when I wanted suthin' bad fur to keep on hopin' I'de git it an' perchance I would. So I'll keep on hopin' Dave will come with my carpetbag.

The same afternoon I met a feller that said he node Dave an' gave him a letter an' fifty cents to give him when he come, tellin' where to find me at my roomin' house.

The next day I took a stroll 'round lookin' at this thing an' that thing an' let me tell you that Tulsa covers more land than Eph. Koonses sheep pasture south of Mink City an' though a younger town than our county seat back home it has it on the dead run for bigness an' so forth. I found rods an' rods of bricked streets an' boardwalks made of cement as smooth as a kitchen floor an' instead of oil lamps stuck on the top of poles like we have in Mink City, they have wires strung all over the town an' attached to glass bowls like they keep goldfish in in some places, an' when night comes a feller presses a button somewhere an' the town is lit up light as day pretty near. Then there's street cars runnin' this way and that way an' you can go where you want to fur 5 cents per ride fur cash. And sich stores an' banks to keep money in. I went into one the other day fur a pair of socks and actually it would make Cy Jones' grocery look like Nick Hammersteins bank barn in comparison, so to speak.

Then they have oil well supply stores here too. I dropped into one just to look 'round an' I want to say that the implements peartainin' to diggin' oil wells has changed since I worked at it in Cattaraugus county. As usual, I let 'em know who I was, an' of course they wanted the store writ up in the Walking Beam an' handed me a toby to smoke. Actually I seen bits fur diggin' oil wells big as saw logs an' other things too numerous to mention, of which I will speak of some other time.

You will remember about Bub Zimmerman follerin' a 2 horse wagon off frum Posey county last fall an' never heard of agin. Who do you suppose I seen last evenin' but Bub, lookin' as unconcerned as a retired horse trader, with a female attached to the crook of his left elbo, an' her dressed like I seen them at Conneaut Lake on bathin' days. Bein' as Bub's pap had axed me if I seen him to see if he remembered where he left the maul an' wedge when splitten rails. I sez, "Hellow Bub, I'm dadburned glad to meet you," an' offered him my hand, which he forgot to take, an' kept lookin' at me as wild eyed as a newly captured Jack Rabbit

for a spell, when the little female he was totin' detached herself from his elbo an sez, "Mr. Mudge, give the poor old man a dime. We'll be late for the show."

Looky here, miss, sez I, "I'm William Johnson, late of Posey county, Ingeanner, an' not 'round solicitin' alms for the heathen. You may call this little run Mr. Mudge or Mud or what ever you goshhanged please," sez I, "but his right name is Bub Zimmerman of Posey county an' a lazier good fur nothin' critter never carried nubbins to a blind mule, an' his family took turns Sundays runnin' him down to make him change socks, an', turning to Bub I sez: Bub, your pap sez if you'll go back home an' act as if you node hay from corn fodder, he'll let you help around the place for your boardin' " sez I.

When I said this, dummed if that girl of Bub's dident waltz right up and grabs holt of my hand an' sez, "Uncle Billy, me an' him were goin' to git married net week, an' its the fourth rich feller I've been engaged to since I come to Oklahoma, what's turned out to be poorer than a Texas steer in January," sez she. I left them standin' there, her sassin' Bub like as though they'd bin married a year or so an' the follerin' mornin' I took the train for the Cushin' oil field.

(To be continued.)

Report of Invasion of Posey County Causes Consternation—Mink City for Preparedness.

It was not until a number of us had raised a collection an' signed for a daily paper, did we learn that in various parts of the world a terrible war was ragin' an' devastatin' the land. Bein' a number of us could not read in 2 sylables, we adjourned to Cy Jones' grocery upon the arrival of the mail from the county seat, an' Bill Hooks, who tought our deestrict school a term when a young feller, read the paper out loud which informed us of the terrible war an' of the thousands slain in mortal combat. Evenin' after evenin' we listened with bated breath to Bill tellin' of how they throed curtains of fire an' great balls of gas an' shells bigger than meat barrels, which annihilated an' killed whole regiments of men on either side, but Bill couldent find one line in the paper tellin' what they were killin' each other fur. We even sent a letter with return stamp on an envelope to the editor of the paper askin' what the tarnation they were fightin' fur an' he wrote back sayin' "he'd be dummed if he node." It was not until Bill read of them sinkin' a ship an' drownin' some of our citizens an' the foreigners that did it said fur us to stay at home if we dident want to git drowned, that our dander arose and we passed a resolution amongst ourselves declarin' we wouldn't allow any dadburned foreign nation to go prancing around with a chip on its shoulder an' darin' us to knock it off. Notwithstandin' our wrathful mood, we done our best to be neutral until Bill read one evenin' that our president of these United States, which included Posey county, issued a proclamation for all to git ready for an invasion of this glorious republic by a foreign foe. We all held our breath for a spell after Bill quit readin' but the look on each of our pale faces bespoke our thots. Then Sol. Skinner our town constable an' detective, who overheated himself at the battle of Bull Run frum hard sprintin', and frum which ailment draws a pension, climbed onto the counter an' sez:

Mary Cassatt

shall every dadburned man, woman an' child who disobeyed him.

Havin' no power to stop the tide of comin' days Friday cum an' with the ringin' of the schoolhouse bell, the citizens of Mink City assembled in Nick Hammerstein's pasture lot, where them as were pronounced able physically to take up arms in defense of our firesides, were to be enrolled in Sol's company. Heretofore we'd bin pridin' ourselves on Mink City bein' located in the healthiest part of Posey county, but when Doc Stenhouse got thru diognosin' ailments, there wasent a disease in the latest revised medical books but what some of us was heir to, some havin' as high as three ailments. In vain Sol, who had girded himself around with a strip of buntin', with a sword buckled to his waste, had widow Blossom sing "My Country, 'Tis of Thee," an' himself repeated Washington's farewell address, there wasent one of us, owin' to physical disabilities, dared to, as Hen Weatherspoon said, "risk our lives on an uncertainty."

Actually it were a dadburned shame the way Sol sassed an' called us names, jist because we wouldent enlist for preparedness an' have to dig holes to crawl into to keep from bein' killed off the face of the earth by foreign zeppelins when by donatin' to them same foreigners, our Ingersol time pieces and board them for a spell they'd let us live out our allotted time. I 'low Sol would have compelled us to jine his company if his second woman, a big, husky female, who believed more in preparin' for next winter's eatables than fightin' 'maginary foreigners sailed into the pastuerfield an' told Sol she'd give him two minuts to disrobe hisself of buntine an' fightin' implements an' git inter the cabbage patch where he belonged or he'd think aw hole brigade of Germans had fell on him.

Dummed if I ever see a feller subdue his patriotism in as vigorous a manner. It were like droppin' a lighted torch into a tub of water, so to speak. Havin' seen his wife in one of her tantrums, it werent half of no time afore the last of us were climbin' the pasture field fence in the wake of Sol, who was hittin' the sod about once in fifteen feet in the direction of his house, an' minus his military regalia.

That night me and some more of us held a secret meetin' in Cy Jones place where was passed the followerin' resolutions:

Bein' if we hadent taken the New York newspaper we wouldent have node anything about the war, which would have saved us considerable anxiety, be it resolved that we quit takin' it.

Be it resolved that a vote of thanks be rendered to Mrs. Sol Skinner for interruptin' our enlistment meetin' an' allowin' us to git home without enlistin'.

Be it resolved that we embody ourselves into a neutral society an' to remain exceedingly so 'till peace is restored where theres fightin'.

Be it resolved that a copy of these resolutions be sent to Mrs. Sol Skinner, an' one printed in the Walking Beam, our town constable an' detective to pay fur the same.

OIL NOTES.

Nate Collins has traded his interest in the Cross Roads Oil company for a motorcycle and has entered the employ of Kale Duffy, our artistic gun fixer, ridin' to and froe from work.

Lightnin' come mighty near hittin' number one derrick of the Crab Creek Company durin' a thunder

U. S. CIVIL SERVICE EXAMINATION.

July 18, 1916.

The United States Civil Service Commission announces an open competitive examination for natural gas engineer, for men only. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in this position in the Bureau of Mines, Department of the Interior, for service in the field, at a salary ranging from $1,800 to $2,500 per annum, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The duties of this position will be to participate in the engineering and economic work of the Bureau of Mines in relation to the production, transportation, distribution, and utilization of natural gas throughout the United States, and with special reference to the prevention of waste, and the improvements of methods used in the industry.

Competitors will not be assembled for examination, but will be rated on the following subjects, which will have the relative weights indicated.

Subjects.	Weights.
1. Education	30
2. Engineering experience	50
3. Publications, reports, or designs	20
Total	100

Graduation in engineering from a college or university of recognized standing, and not less than two years' experience in the designing, constructing, and operating of natural gas producing or transportation properties, are prerequisites for consideration for this position.

Under subject 3 publications, reports, or designs indicating an intimate knowledge of the principles and practices of natural gas engineering will be given weight in accordance with their importance to those matters.

Statements as to education and experience are accepted subject to verification.

Applicants must have reacred their twenty-first but not their fortieth birthday on the date of the examination.

This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for Form 2118, stating the title of the examination desired, to the United States Civil Service Commission, Washington, D. C.; the Secretary of the United States Civil Service Board, Post Office, Boston, Mass., Philadelphia, Pa., Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Wash., San Francisco, Cal.; Customhouse, New York, N. Y., New Orleans, La., Honolulu, Hawaii; Old Customhouse, St. Louis, Mo.; Administration Building, Balboa Heights, Canal Zone; or to the Chairman of the Porto Rican Civil Service Commission, San Juan, P. R. Applications should be properly executed, excluding the medical and county officer's certificates, and must be filed with the Commission at Washington, with the material required, prior to the hour of closing business on July 18, 1916.

The Horse and the Colt.

From the French of Florian.

(By C. C. Cochrane.)

A good father horse, widower and having but one son, was bringing him up in a pasture where the water, the flowers and the shade, presented at once all the advantages united.

Overdoing himself, as is common at this age, the colt gorged himself with the fresh grass every day, rolled among the flowering plants, galloped around aimlessly, bathed in the clear water at will or laid down to rest when necessary. Lazy and fat as butter, the young solitary became weary of his way of living—tired of having everything the heart could wish—disgust came soon. He went to find his father.

"For a long time," said he, "I have not felt well; this grass is unhealthy and is killing me—this clover is without relish, this water is tainted, the air which one has to breathe here is infected and injures my lungs; in short I will die if we do not get away from this place."

"My son," answered the father "your life is at stake, this instant we must leave."

No sooner said than done; they left their native heath. The young traveler was radiant with joy; the old horse less joyous but more wise led the way towards the mountain, steep and bare, without a blade of grass—where nothing could live. The evening came on—not a sign of pasture; they did without it. The next day as they commenced to suffer from hunger they began to nibble at the thorns of the roadside.

There was no galloping during the rest of the trip; after two days they could scarcely walk. Judging the lesson learned, the father took a secret route that the son did not know and brought him back again to his pasture in the middle of the night.

As soon as our colt found himself again in fresh grass and among the flowering plants he attacked them with vigor.

"Oh! the excellent feast—the good grass," said he, "how sweet and tender it is! We need not wait with the expectation of finding better; let us establish ourselves forever in this lovely place; what country could equal this asylum?"

As he spoke thus the day began to break; the colt recognized the prairie he had left and was covered with confusion. The father said to him gently: "My dear child, don't forget this maxim: 'Whoever enjoys himself too much is soon disgusted. You must be temperate to enjoy real happiness.'"

The Cultural Value of

Review of Oil Developments.

For the Second Quarter of 1916. Market Quotations, Field Developments, Runs, Shipments, Stocks, Etc.

Since our last report was written there have practically been no changes in the price of crude petroleum. On June 15, the Crichton product, on account of the poor quality of the oil, suffered a setback of 15 cents. Wooster, on the other hand, was accelerated 10 cents for just the opposite reason.

The purchasing agencies are now paying for the various grades of oil as follows:

Pennsylvania	$2.60
Mercer Black	2.10
New Castle	2.10
Corning	2.10
Cabell	2.12
North Lima	1.73
South Lima	1.73
Wooster	2.00
Indiana	1.58
Princeton	1.82
Somerset	1.95
Ragland	.90
Illinois	1.82
Kansas and Oklahoma	1.55
Plymouth	1.68
Healdton	.80
Corsicana Light	1.55
Corsicana Heavy	.80
Electra	1.55
Henrietta	1.55
Thrall	1.55
Strawn	1.55
Moran	1.55
De Soto	1.45
Crichton	.90
Caddo 38 deg.	1.55
Caddo 35 deg.	1.45
Caddo 32 deg.	1.40
Caddo Crude	.90
Canada	2.13

At the beginning of the present year the hopeful feeling that higher prices for their product would prevail and that the year 1916 would be the most prosperous one for the oil trade in many years has so far proved true. The cause that started the oil market booming was principally due to the great decline in the Cushing field, Oklahoma, which after reaching an output of over 300,000 barrels a day commenced to recede very rapidly going below the 100,000 barrel mark. The enormous demand for gasoline and the other vlauable by-products, coupled with the great war that caused the cessation of operations in nearly all the foreign oil fields, also had its effect, by creating an immense demand for oil abroad. The producer naturally held his oil for higher prices and for some time the refiners had difficulty in filling their orders, especially in the Eastern fields. $3.00 for the high grade product was the mark generally set as the top with a proportionate advance for the other grades. This has not exactly been realized as the prices are apparently pegged at the above quotations. The disposition, therefore, to hold oil encouraged by ruling conditions has given way to a prevailing opinion that oil is on top for the present, at least, and to take no chances by holding for a further advance.

The Federal Trade Commission

has been at work for several weeks investigating the cause for the increase in the price of gasoline. Any one who has followed the course of events and is conversant with the oil business knows that it is a purely economic question, that from present developments will be answered in the near future satisfactorily to the consumers.

That there is to be no famine just yet in crude oil is shown by the steady increase of the output of the various pools of the Mid-Continent district. While Cushing, the father of all pools, declined very rapidly from its maximum production of over 300,000 barrels a day, yet the other pools—Shamrock, Augusta, El Dorado and Healdton have under the stimulus of high prices come to the front with wells that are making up to a great extent for the decline in the Cushing pool. The latter pool is not dead by any means and is still a factor in determining the future price of oil. It is producing from late reports 110,000 barrels a day. This shows an increase of 20,000 barrels a day from its lowest point of 90,000 barrels. New wells are being drilled in large numbers on the outlying edge of the pool, and while they do not show such gushing qualities as those gone before yet they are sufficient to maintain the production of the field for a long time to come, to say nothing of a probable increase during the summer months.

While the stocks in the Cushing field have been drawn on to some extent there is a large amount of oil held by the different oil companies. The following figures show its distribution among the several big companies:

Company—	Bbls. stored
Carter Oil Company	18,311,760
Prairie Companies	9,367,000
The Texas Company	4,166,200
Standard of Indiana	3,500,000
Cosden & Co.	1,335,000
Magnolia Petroleum Company	465,000
Sapulpa Refining Company	330,300
Chanute Refining Company	298,500
Gulf Pipe Line	638,500
Oklahoma Oil Company	909,000
Silurian Oil Company	690,700
B. B. Jones	532,000
C. B. Shaffer	270,000
Cudahy Refining Company	117,600
Pierce Oil Corp.	178,800
Sun Refining Company	163,000
Roxanna Petroleum Company	337,500
Hill Oil and Gas Company	25,500
Indiahoma Refining Company	52,800

The estimated production of the fields of the Mid-Continent district at the close of June was as follows:

Caddo, 35,750 bbls.; Electra, 20,000; Corsicana light and Thrall, 2,550 bbls.; Kansas, 31,000 bbls.; Oklahoma, outside of Cushing, Healdton and Shamrock, 149,000 bbls.; Cushing and Shamrock, 145,000 bbls.; Healdton, 65,000 bbls.; total, 448,250 bbls.

The estimated daily production of heavy gravity oil in the Gulf Coast field was 73,400 bbls.; Corsicana heavy, 550 bbls.

The Shamrock pool is the centre of attraction in the Oklahoma field and is furnishing some gusher wells that compare favorably with some of Cushing's finest. A few weeks ago the Shamrock field was producing 25,000 barrels daily, while at the present time it is said to be producing 75,000 barrels, which added to the Cushing pool gives a daily output of 175,000. It is not thought, however, that the Shamrock field will show very great staying qualities and the chances for an extension does not seem to be probable at this time.

In the Kansas field the Augusta and El Dorado pools are the inviting features and are proving better than the operators in those districts anticipated. The lack of pipe line

facilities is hampering matters to a great extent and a large number of wells are shut in waiting for pipe line connections. There is no steel tankage in the field outside of the few tanks owned by the Prairie Oil & Gas Co., and the Augusta producers find themselves in the same predicament as the Cushing operators were over a year ago—plenty of oil but no market. One of these wells that had been shut in for some time was opened up and it started off at a 6,000 barrel gait. In the El Dorado pool activity is the word and it is gradually being extended to the northeast and southwest. The Empire Gas & Fuel Co. recently completed a good well on the Hegeberg farm that started off at 1,000 barrels a day. This well is in deep territory, over 2,400 feet in depth.

The Kentucky fields have been attracting considerable attention in the past few months and there has been quite an exodus from the Eastern fields to that territory.

The completion of a pipe line from the Irvine pool which connects with the main line of the Cumberland Pipe Line Co., near Compton, in Wolfe county, is a very pleasing fact to the producers in that district and in consequence no more oil will be shipped in tank cars from the Irvine field. Wells that produce 50, 75 and as high as 150 barrels a day are now being found.

The runs from the various Kentucky districts for May were as follows:

District—	Runs Bb's.
Cooper	4,113.11
Denny	3,322.52
Steubenville	5,338.76
Parmleyville	3,001.40
Busseyville	1,681.75
Stillwater	806.70
Campton	1,211.45
Beaver Creek	886.94
Irvine	48,250.60
Ragland	3,323.73
Lewis	1,318.51
Total	73,255.47
Daily average	2,441.85

The runs from the wells of the various districts during the past week were as follows:

District—	Runs Bb'ls.
Busseyville	818.74
Cooper	1,217.57
Denny	727.18
Steubenville	820.11
Irvine	13,569.76
Campton	485.31
Stillwater	135.62
Beaver Creek	245.53
Ragland	529.06
Parmleyville	737.55
Total	19,286.43
Previous week	18,113.04
Difference	1,173.39
Daily average	2,755.21

In California the production in round figures will total 250,000 barrels daily and is the largest daily output since January, 1915. The shipments in May were not so large as in April.

With the exception of the month of June, 1914, shipments of California crude during April broke all previous records, being figured at 8,785,715 barrels, a daily average of 292,857. The total for June, 1914, was 8,986,951 barrels, a daily average of 299,565. This fact, coupled with only a slight increase in production in April as compared to March, formed a combination that reduced the stocks of crude oil by 1,413,235 barrels, a daily average of 47,108, the greatest reduction ever recorded in a single month in the recent history of the petroleum industry of the state.

Statistics prepared and made public by the Independent Oil Producers' Agency at Los Angeles indicates that the total output of crude in April was 7,372,480 bar-

rels, a daily average of 245,749, compared to a daily average in March of 242,744 barrels, showing a daily average increase of 3,005 barrels. The April daily average is practically identical with the daily average for the year 1915, and is 36,749 barrels a day under the 1914 record.

April shipments showed a daily average increase over the previous month of nearly 23,000 barrels. Compared to the daily average shipments during the year 1914, the April record shows an increase of 40 781 barrels daily, and 34,000 barrels a day over the daily average record established in the year 1914.

Total stocks of crude in the field and in pipe lines amounted to 53,-022,830 barrels on May 1, against 54,436,065 barrels on April 1, a reduction of 1,413,235 barrels. The total stocks on January 1, 1916, were 55,977,180 barrels, indicating a draft for the first four months of the year of nearly 3,000,000 barrels.

Development work is still looking up, 53 wells being recorded as completed in April, against 35 completions in March, an increase of 18 wells. The record of drilling wells at the close of April shows a total of 220, against 195 at the close of March. There were 77 new rigs up at the end of April, as compared to 62 at the end of March, an increase of 15. Twenty-one wells were abandoned in April, against 4 in March. Producing wells totaled 6,368 at the close of April, against 6,282 at the close of March, an increase of 86.

Petroleum Exports.

The preliminary report of the Bureau of Foreign and Domestic Commerce exports of mineral oils for April and ten months ending with April shows a considerable decrease in the quantity of mineral oils exported in April, although the price paid for the smaller quantity was more than a million dollars in excess of the price paid for the quantity exported in April, 1915. This preliminary statement is subject to correction in the bulletin which is published later. It shows that in April there were exported mineral oils to the extent of 156,-170,113 gallons valued at $12,365,-938 compared with 169,585,645 gallons valued at $11,299,874 in April, 1915. During the ten months period ending with April the exports were 1,964,121,162 gallons valued at $126,905,521, compared with 1,741,-107,333 gallons valued at $105,693,-532 in the ten months ending April, 1915.

Gasoline, naphtha, etc., was exported in April to the extent of 19,-231,753 gallons, valued at $3,528,-551, compared with 23,993,069 gallons valued at $2,722,480. During the ten months' period exportation of gasoline, etc., was 222,833,194 gallons valued at $32,049,131 compared with 188,662,629 gallons valued at $21,355,491 in the ten months ending April, 1915.

Crude oil was exported in April to the amount of 14,811,470 gallons compared with 8,345,247 gallons in the previous year.

Illuminating oil exports decreased, the amount being 49,902,841 gallons compared with 58,436,280 gallons in the previous April.

Lubricating oil exports also show a decrease, the amount being 18,-214,064 gallons compared with 25,-605,519 gallons in the previous April.

The total output in the Appalachian field, which includes the areas of the oil producing states of

New York, Pennsylvania, West Virginia, Kentucky and Southeastern Ohio was 22,860,048 barrels in 1915, according to statistics compiled under the supervision of J. D. Northrop of the United States Geological Survey, a decrease of 1,241,000 barrels, or 5 per cent, from the output of this field in 1914. This decrease was well distributed among the contributing states and is remarkably small in view of the fact that the oil market did not begin to recover from the depression caused by the over-production of oil in Oklahoma in 1914 until August, 1915.

cent, yielded oil, 1,254 were classed as gassers, and 1,038 were barren. The combined output for the first day of productive life of the oil wells completed in 1915 was 31,922 barrels, or an average of 11 barrels for each well. Individual wells in Pennsylvania and New York averaged 7 barrels each, in Eastern and Central Ohio, 12 barrels, in Kentucky, 13 barrels, and in West Virginia, 18 barrels.

Petroleum Marketed from Appalachian Field in 1915, in Barrels of 42 Gallons.

Month—	Pennsylvania	New York	So. Ohio	W. Virginia	Kentucky	Total
January	629,588	74,101	382,236	777,702	34,898	1,898,525
February	615,005	67,755	361,100	754,034	35.707	1,833,601
March	672,343	79,840	398,430	848,926	39,562	2,039,101
April	697,036	79,018	385,427	801,046	40,015	2,002,542
May	638,490	75,114	362,097	767,685	39,323	1,882,709
June	683,410	76,408	377,345	789,545	37,070	1,963,778
July	682,583	79,012	366,426	780,749	35,905	1,944,675
August	655,242	72,531	357.799	761,111	37,531	1,884,214
September ...	654,036	72,914	353,556	752,751	34,929	1,868,186
October	645,333	72,399	363,534	716,638	33 564	1,831,468
November	623,955	66,218	342,700	720,267	34,702	1,787,842
December	641,684	72,468	380,843	794,344	34,068	1,923,407

The average price of this oil at the wells was $1.55 a barrel, and the total market value was $35,468,973, a decrease of 33 cents in average unit price and of $9,770,228, or 22 per cent in total value, from 1914.

Throughout the field as a whole, drilling activity, which generally reflects market conditions rather closely, was below the normal, although in certain areas there was abnormal activity resulting from the discovery that they were underlain by small pools of oil that had been overlooked in the earlier development of the region.

A total of 5,197 wells were completed, of which 2,905, or 56 per

Mexico Oil.

As an instance as to how things have been run by the Carranza de facto government is witnessed by the trouble the American oil operators have been subjected to by the arbitrary Mexican authorities.

The oil men declare the Mexican military officials are promulgating decrees designed to make it impossible for Americans to do business in the country and tell how one of their number had been arrested and imprisoned for three hours because he refused to pay his employes wages fixed by the authorities in excess of terms previously agreed upon with the men.

The Americans have sent a message to the White House asking for protection from the American government, and announced their de-

termination not to comply with arbitrary and confiscatory orders and decrees by the Mexicans.

Notwithstanding these troubles the shipments so far from Tampico in the present year show a large gain over the same period last year. The shipments of Mexican oil products during March and April, 1916, amounted to 1,383,978 and 1,262,987 barrels of 42 gallons, respectively.

The March shipments included 44,150 barrels of refined and 26,000 barrels of distillate, but with these exceptions the entire movement consisted of crude oil. In March and April of 1915 the respective totals were 990,861 and 740,614 barrels, from which it may be deduced that trade conditions this year are more favorable. Producers claim they would have no trouble disposing of much larger shipments if it were possible to secure ocean tankage.

The respective figures for March and April of this year give an average of less than 50,000 barrels of oil loaded for export, whereas considerable in excess of 100,000 barrels per day are available without allowing the larger wells to produce their maximum or drawing on supplies in steel storage. During April the new Standard Oil tanker Charles Pratt, on its maiden voyage, took a partial cargo from Tampico. It is one of the largest oil carriers in the trade, having a capacity for 125,000 barrels, its draft when fully loaded is too great to cross the Panuco River bar, hence it had to complete loading at Tuxpan. Its destination was Montevideo, Uruguay, and Campana, Argentina.

With war between the United States and Mexico, the Mexican oil fields will undoubtedly be one of the first objective points for possession by Uncle Sam.

The following from the Oil City Derrick gives a comprehensive report of the work of the pipe lines during May:

The monthly report of the Eastern pipe lines that make public the runs, deliveries and stocks, shows a good increase in the daily average receipts from the wells during May; a decrease in the amount delivered, and a fair reduction in the stocks held at the close of the month as compared with April. Receipts from the wells in the Eastern fields amounted to 1,991,599 barrels, with a daily average of 64,245 barrels. The gain over April was 181,580 barrels in the total, and of 3,911 barrels in the daily average, as May had one more business day than the previous month. This is a larger daily average of runs than for any month since last June, and has been exceeded by only eight months in two years. Each pipe line, without exception, reported more receipts in May than in the previous month. The largest increases were by the Eureka in West Virginia, the Buckeye companies, and the Cumberland. It would indicate that the active operations and the work being done on the old leases, are having some effect on the production. Though the amount obtained by each new producer is small the increased number of them, supplemented by an occasional large well, is adding a little to the output. In January the daily average of the runs was 54,096 or over 10,000 barrels a day less than May. The greatest increase since that time has been in the Eureka reports, which cover West Virginia, and the Cumberland of Kentucky. The latter ran only 30,799 barrels in January.

ures. The daily average of the Illinois runs for May was 37,645 barrels, making the best average for the year. In April the daily runs were 34,331; for March 37,527; February 34,013, and January 33,397 barrels. In May, 1915, the daily average was 41,005 barrels.

The runs from all the fields east of the Mississippi in May, aggregated 3,158,614 barrels, a gain of 318,640 barrels over April. The former report showed a loss of 170,527 barrels from the March figures, and in that month there was an increase of 376,511 barrels over February. It is remarkable that the receipts from the wells in May from the Eastern fields and Illinois, exceeded those for the corresponding month of 1915, when they were 3,145,047 barrels. The daily average for the present report is 101,890 as against 101,453 barrels a year ago.

The pipe lines of Oklahoma and Kansas were estimated to have received 8,977,402 barrels during May, an increase of 380,929 barrels over April. The daily average increased from 286,719 barrels in April to 289,593 barrels for May. This makes a new high mark in the amount of oil received from the wells of that division, even as the report for April was the largest up to that time.

The runs from the fields east of the Mississippi, and those of the Mid-Continent aggregated 12,136,016 barrels in May, an increase of 699,569 barrels over the April figures. The daily average of all these runs was 391,484 barrels, as against 381,215 barrels in April, and 375,691 barrels in March. For February the daily average was 352,657 and in January 329,261 barrels, which shows a consistent increase for each month of the present year.

Deliveries by the Eastern lines during May were 3,888,067 barrels, with a daily average of 125,421 barrels. The regular deliveries by the pipe lines of Illinois amounted to 267,031 barrels, as against 108,317 barrels in April. The Tidewater line also delivered 98,175 barrels of Mid-Continent crude.

Deliveries by the Mid-Continent lines in May were 9,524,886 barrels, a gain of 437,802 barrels over the April figures. The daily averages were 307,253 for May and 302,903 barrels for April, a gain for the present report of 4,350 barrels.

The following table shows the amount of crude petroleum held in storage by the several pipe lines mentioned in the different divisions of the oil fields, and the amount of each grade at the close of business May 31:

Grade of Oil—	Total Bbls.
Pennsylvania	4,000,302.16
Lima	1,207,688.27
Kentucky	331,425.67
Illinois (Eastern lines)	1,255,465.39
Illinois (Illinois Pipe Line)	4,455,291.34
Mid-Continent (Eastern lines)	3,380,900.98
Mid-Continent (P. O. & G.)	41,100,000.00
Mid-Continent (P. P. L.)	1,000,000.00
Mid-Continent (Mag. Pet.)	1,475,977.00
Mid-Continent (Gulf P. L.)	4,750,000.00
Mid-Continent (The Texas Co.)	8,259,453.00
Mid-Continent (Carter Oil Co.)	20,000,000.00
Mid-Continent (Outside lines)	3,857,000.00
Total May 31	95,073,502.82
Total April 30	96,936,187.38
Decrease	1,862,684.56

The following table shows the condition of stocks in the same lines and companies at the close of business April 30:

Grade of Oil—	Total Bbls.
Pennsylvania	4,364,984.91
Lima	1,170,968.95
Kentucky	255,742.04
Illinois (Eastern lines)	1,513,112.50
Illinois (Illinois Pipe Line)	4,582,808.18
Mid-Continent (Eastern lines)	3,074,895.80

Mid-Continent (P. O. & G.)...	41,300,000.00
Mid-Continent (P. P. L.).....	1,000,000.00
Mid-Continent (Mag. Pet.)....	1,630,977.00
Mid-Continent (Gulf P. L.)....	6,000,000.00
Mid-Continent (Texas Co.)....	8,247,698.00
Mid-Continent (Carter Oil Co.)	20,000,000.00
Mid-Continent (Outside lines)	3,795,000.00
Total April 30	96,936,187.38
Total March 31	97,554,165.86
Decrease	617,978.48

During May stocks in the divisions represented by the report were reduced 1,862,684 barrels. Of this amount 1,531,246 barrels came from the Mid-Continent field, 203,921 barrels from the stocks of the Eastern lines, and 127,517 barrels in the Illinois Pipe Line. The figures do not represent approximately 10,000,000 barrels held in storage on private tank farms and leases in the Mid-Continent field.

STANDARD OIL SUBSIDIARIES.

Stocks—	Bid	Ask
Anglo-American	15½	16
Atlantic Refining	688	695
Borne-Scrymser	340	350
Buckeye P. L.	85	90
Chesebrough Mfg.	300	305
Colonial Oil	70	81
Continental Oil	315	320
Crescent P. L.	41	43
Cumberland P. L.	80	85
Eureka P. L.	200	205
Galena-Signal Oil, com.	152	154
Galena-Signal Oil, pfd.	138	142
Illinois P. L.	159	161
Indiana P. L.	87	90
National Transit	15	16
New York Transit	183	188
Northern P. L.	93	96
Ohio Oil	225	227
Prairie P. L.	218	220
Prairie O. & G.	400	405
Solar Refining	270	275
Southern P. L.	188	190
South Penn Oil	345	350
Southwest Pa. P. L.	103	106
Standard Oil of California	248	250
Standard Oil of Indiana	545	550
Standard Oil of Kansas	440	450
Standard Oil of Kentucky	400	410
Standard Oil of Nebraska	340	350
Standard Oil of New Jersey ...	521	524
Standard Oil of New York....	206	208
Standard Oil of Ohio	620	630
Swan & Finch	95	100
Union Tank Line	81	83
Vacuum Oil	252	256
Washington Oil	30	40

Tire Trouble by R. S. Wilson.

Whenever a motorist detects his tires undergoing unusual tread wear he should at once make certain that the wheels are true," is the declaration of R. S. Wilson, Manager Service Department, The Goodyear Tire & Rubber Co., Akron, Ohio.

"Disalignment of wheels is the unsuspected cause of the premature demise of many tires. When the wheels of a car are not parallel, the tire must undergo a diagonal grind as it passes over the road surface. Sometimes an exle becomes bent by a severe blow, or the steering apparatus gets out of adjustment. Often demountable rims are not put on straight. Bearings sometimes become worn and permit the wheels to wabble. In any case—the tread soon grinds and the fabric of the tire is exposed to many destructive agencies.

"By close observation you can distinguish many cars being driven with wheels perceptibly out of true. In numerous instances the motorist is not aware that his tires are being subjected to abnormal wear until the announcement comes in form of a worn-off tread or a blow-out.

"After your car has received a hard bump you should see at once that the axles have not been bent or the wheels knocked out of true. Your tire dealer or garageman will usually be pleased to examine them or if his service does not cover this, will suggest where it can be done."

OBITUARY.

Daniel O'Day, aged 46, a man of wide affairs, a business man of rare ability and prominent as a leader in some of the most important concerns in the country, died at his home in Rye, N. Y., after an illness dating from early in December when he contracted the grippe, which was followed by complications so grave that all the best medical skill and professional nursing were unable to do more than delay the end.

Mr. O'Day was born in Titusville and his early life was spent there and in Buffalo. He was educated in the Georgetown University, graduating in the class of 1889. Soon after reaching his majority he developed the talent for business that later made him so successful and his reputation for acumen and grasp of large affairs nation wide. He was a son of Daniel O'Day, whose death occurred September 13, 1906, after more than a year's illness. The elder O'Day was one of the most prominent figures in the Standard Oil Company and at the time of his last illness and at his death was vice president of the National Transit Co., which, before the dissolution of Standard Oil, was its controlling company. For more than a year during which the father was abroad hoping to benefit his health, the son filled his position with the company, besides directing all of the vast business interests of the father.

He was a heavy stockholder in the Standard Oil Company and its subsidiaries, and was director and leading stockholder in many producing companies in this country and in Mexico, the Port Lobos Petroleum Co., operating in Mexico, of which he was a director, is one of the largest oil operating concerns in that field. He was a director of the Oil City Boiler Works, and president and treasurer of the Venango Oil & Land Co. He was remarkably frank and pleasing in manner, characteristics that gained him many friends, to whom his passing brings a sense of personal bereavement. In addition to his oil interests in the Western and Mexican fields, he was at the time of his death vice president and treasurer of the Cairo Oil Co., operating in the West Virginia field, and, with his brothers, had large real estate interests in Buffalo, N. Y.

William P. Sutton in his 70th year, died at his home in the Hart block, East Second street, Oil City, after more than a year's illness from a complication of diseases. He was born in Mechanicsville, Pa., August 17, 1846. On February 29, 1864, he enlisted in Company A, Fourth Cavalry, and was mustered out with the remainder of the command at Leechburg, Va., July 1, 1865. This company was recruited in Venango county and upon his discharge, Mr. Sutton returned to his former home in Mechanicsville, but soon afterwards went to the Oil Creek fields, where he followed various occupations of the oil development. Some 30 years ago he located at Oil City and for many years, until incapacitated by illness, was engaged in the draying business there. He was a man of

splendid character, friendly and kind, with many friends, especially on the south side of the city, where most of his business activities were confined during his residence there.

H. Clay Beman, aged about 70, for many years manager of the Oil City Fuel Supply Co., in Meadville, died at his home on Mead street in that city after suffering several strokes of paralysis, one having come just before his death.

Mr. Beman was born in Cussewago township, Crawford county, and was educated at Edinboro Normal school and the Syracuse Business college, having later become an instructor in the latter instiution. He served in the Civil war under Captain Walker in the 103 Pennsylvania infantry.

At one time Mr. Beman was associated with J. C. Dixon in the coal business and then for many years served as manager of the Meadville office of the Oil City Fuel Supply Co., from which position he resigned 12 years ago.

At the time of his death Mr. Beman was manager of the Beman Automobile Oil Can Co., the many patented devices of which he was the inventor. He was founder of this company which bore his name.

The deceased was one of the pioneer steamboat men of Conneaut Lake and for a number of years was in charge of the first double deck boat ever used there—the Nickleplate, the construction of which he personally superintended.

At the time of his death Mr. Beman had other interests, prominent among which was the Meadville Malleable Iron Co., of which he was a director.

J. C. Tennent was born in Avon, Livingston county, N. Y., January 6, 1852. The family soon moved to Mumford, N. Y., where his boyhood days were passed, up to 1868, when he drifted to Petroleum Centre, at which place and along the creek he was employed in various different capacities, getting his first taste of the oil business. After four or five years the business became monotonous, and he left the oil country until 1877, when he again showed up in the region, this time at Bradford, where he met his old friend and employer on the creek, Wesley Chambers, and was soon at work for him caring for the Bradford Oil Co.'s wells at State Line, and later superintending their wells at Four Mile, at Rock City, and it was here, in the same year, that he met and wedded his wife Jane Isabel'e Peck, daughter of A. H. Peck. Mr. Tennent's experience in handling oil wells covered a period of 11 years, part of which time was in the machinery line, and then came his first scouting work on the Van Scoy well, which opened up the Dew Drop development near Kinzua, in 1880. In the spring of 1882 his employer, Captain J. T. Jones, of the Bradford Oil Co., failing to get the news to which he was entitled concerning the mystery well on 646, in Cherry Grove field, became a heavy loser on long oil when the initial producer of the flashy field was opened up. He sent Mr. Tennent to Cherry Grove when the Anchor Oil Co.'s gusher was burning on 647, and here began his active duties in the scouting line. His first job at Cherry Grove was watching Murphy's dry hole on 633 drilled through the sand. Next came the Whale Oil Co.'s duster on 648. It had been drilled below the sand

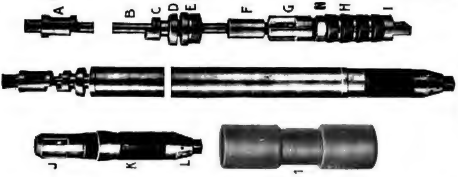

Lake Tahoe
Nevada
California

level and the tools allowed to rest in the bottom of the hole. In the dark hours of Sunday night, July 9, 1882, Tennent and four others raised the tools by hand from the well, and with a steel line borrowed from the Forest Oil Co.'s office measured the well. On the 7th of July the market opened at 49¾ cents and on the 11th, after the scouts had reported the well dry, oil was sold for 60¼ cents. Here was a rise of 10½ cents, due to the failure of one well, illustrating forcibly the value of the services of the scout in quickly getting information to his employer. At this time the Green well, near the southwestern end of the field, was guarded and attracting some attention. The use of a weight and line enabled them to gauge the well at noon when the guards were all off duty. The Shannon mystery and the Cherry Grove pool had to be watched by the scouts at the same time. On one dark night, when he, in company with a fellow scout, remained on duty at the Shannon mystery, his earthly career came near being terminated. While moving along on all fours to get near the well, he grasped a dead limb on a log to draw himself over it; the limb snapped off with a crack like a pistol and the next moment a rifle ball from the gun of a guard who was stationed near by whizzed by the ear of the intrepid scout. However, he made most accurate estimates on the calibre of the Shannon well. On several other occasions it was demonstrated that his estimates on the production of wells which could not be gauged were as near correct as it was possible to make them without the use of a gauge pole. He achieved a brilliant piece of work when they drilled in the May, Kelley & Grandin No. 4, at Balltown, before the owners of the well knew it was in the sand. This was done by means of fictitious orders presented to the drillers in charge, who by financial persuasion, were prevailed upon to believe it was time for them to retire for the night.

Mr. Tennent's work in the scouting line has been of the most brilliant character, and his achievements in the line will go down as history in oil country annals. Later, Mr. Tennent was among the first to get in at Macksburg, and dealt extensively in lands there for some time. The West Virginia field then came into some prominence and the first man to get a paying well in the Sistersville field was Mr. Tennent, who picked up a nice lot of leases, developed the same, acquiring a good production, and, in 1894, sold the property to Captain J. T. Jones, making a nice profit out of his investment and labor there.

Mrs. Laura C. Drake, widow of Col. Edwin L. Drake, driller of the well which marked the formal opening of the great petroleum industry, died May 18th at her home in Germantown, Philadelphia. The remains were brought to Titusville May 21st, accompanied by Mrs. Drake's son, Charles L. Drake, and the interment was at Woodlawn cemetery, in the beautiful mausoleum erected as a memorial to Col. Drake by the late H. H. Rogers. The burial service was conducted by Rev. Albert Broadhurst of St. James Memorial church and was attended by a representative gathering, including a number of those still living here who were personal friends of Col. and Mrs. Drake when

McGregor Working Barrel Co., Inc. BRADFORD PENNA.



PATENT

This Barrel takes the place of the Liner Barrel and Pumps as fast as any 1¾ Barrel on the market. It saves the continued pulling of wells. Write for Pamphlet.

The McCorry Oil Heater

YOU CAN EASILY AVOID YOUR OIL STEAMING TROUBLES THIS WINTER BY USING A McCORRY HEATER.

Special Brass Tank Nipples for Heaters and other purposes.

WRITE FOR BOOK.

MANUFACTURED BY

L. G. McCorry,
Karns City, Pa.

"The One That Works With Salt Water."

they used to reside in Titusville.

Mrs. Drake, whose maiden name was Dowd, and who was Colonel Drake's second wife, was born at Madison, Conn., June 5, 1835. She was married to Col. Drake at New Haven in 1857, and came with him to Titusville in the following year. She was the mother of three children, two boys and one girl. These were Alfred, born in 1857, who died in Colorado in 1911; Charles Henry, born in Titusville February 26, 1862, and the first child christened in the then new St. James Memorial church, and Mary Laura, born in Brooklyn, N. Y., in 1865. Col. Drake, by his first wife, had one son, named George, who died many years ago.

After the striking by Col. Drake of the pioneer well—following the handicaps and trials which have become historical—the family lived there until 1863, when they removed to New York City, remaining there until the failing health of Colonel Drake and his monetary losses forced them to again move, this time to Vermont, and later to the Navesink Highlands of New Jersey. Col. Drake's physical condition at this time was so serious that constant care and medical attention were necessary, and Mrs. Drake was almost the sole support of the family, through sewing and other work until a fund was raised by subscription among the oil discover's friends. At this time Colonel Drake was forced to sit in a chair night and day, but in 1870, was able to be removed to South Bethlehem, Pa., where he died in 1880. The relief given by the Titusville fund was supplemented in 1873 by a pension granted by the Pennsylvania legislature, which gave Col. Drake $1,500 for life, and at his death was payable to his widow during her life.

In 1901 the Drake Memorial was built by the late H. H. Rogers and unveiled on September 4 of that year, and on October 4, the remains were placed there, being brought from South Bethlehem. Provision was made that the remains of Mrs. Drake should also rest there as they now do.

For many years previous to her death Mrs. Drake had resided in Philadelphia, and for a number of years past she and her widowed daughter had made their home together. Early last year she sustained a fall, from the effects of which she never fully recovered, and on account of which she was obliged to forego attendance at the Drake Day observance last year at Oil City, and at which she very much desired to be present. She was a woman who possessed many estimable qualities, and is deserving of much credit for the manner in which she shared with her husband his days of adversity and suffering and helped him to bear them.

She was much interested in and very appreciative of the movements of recent years toward special remembrance of Col. Drake, as particularly expressed in the Rogers memorial at Woodlawn, the D. A. R. memorial marking of the site of the old well, and the Drake Memorial Museum, to which she contributed a number of personal mementoes of Col. Drake.

The National Tube Company Entertains the Delegates in Attendance Upon the 11th Annual Convention of the Natural Gas Association of America and Present Them With a Songster and Souvenir on Their Visit to the McKeesport Works on May 16th, 1916.

The 11th annual convention of the Natural Gas Association of America was held in Pittsburgh, Pa., the week of May 15th. The convention was the best attended and most successful one that has ever been held by this organization.

One of the delightful occurrences during the week was the visit of the delegates to the "National" works of the National Tube Co., which took place Tuesday, May 16th.

The steamer "Sunshine" left Exposition wharf, Allegheny river, at 1:15 p. m. The trip up the Monongahela river to the National works at McKeesport afforded a splendid opportunity for a comprehensive view of the industrial plans located in that district, particularly those of the United States Steel Corporation, a number of which are located on both sides of the river.

Arriving at the National works, the delegates entered the lower end of the mill and were personally conducted through the plant where National pipe may be seen in the making from the ore to the finished product. This building, known as the Tube and Pipe Mill building, is approximately 1600 feet long and 600 feet wide, covering a space of 23 acres, and is the largest building under one continuous roof in the world.

At the conclusion of the inspection of the plant the party was served with a lunch and refreshments at the upper end of the mill, where music by the band and singing by a quartette enlivened the occasion.

As a souvenir of the visit, Mr. G. N. Riley, of the National Tube Co., under whose personal supervision the trip was made, presented each visitor with a copy of a neat little book containing 100 familiar songs, many of them having been sung for generations and will be sung for generations to come. The book also gives an entertaining account and description of the National Tube Co.'s "NATIONAL WORKS," at McKeesport, Pennsylvania.

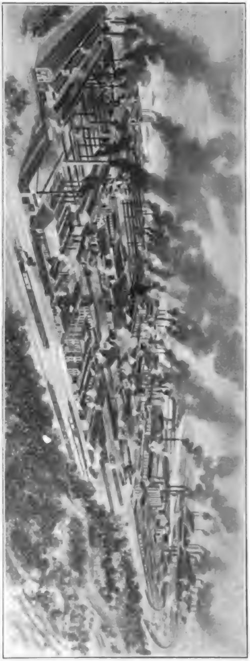


Fig. 1. Sample

Changes in the Price of Oil

The following table, furnished by W. C. Coles & Co., 61 Broadway, New York, N. Y., gives the highest and lowest price paid for oil, each year, since 1860:

Year	Highest	Lowest	Year	Highest	Lowest
1860	$20 00	$ 2 00	1888	1 00	71⅝
1861	1 75	10	1889	1 12½	79½
1862	2 00	10	1890	1 07⅞	60¾
1863	4 00	2 00	1891	81⅝	50
1864	14 00	3 75	1892	64¼	50
1865	10 00	4 00	1893	80	52⅞
1866	5 00	1 65	1894	95¾	78½
1867	4 00	1 50	1895	2 69	94½
1868	5 50	1 80	1896	1 50	90
1869	7 00	4 25	1897	96	65
1870	4 90	2 75	1898	1 19	65
1871	5 15	3 40	1899	1 66	1 13
1872	4 10	3 00	1900	1 68	1 05
1873	3 05	1 00	1901	1 30	1 05
1874	1 90	45	1902	1 54	1 15
1875	1 65	90	1903	1 90	1 50
1876	4 23⅛	1 48¾	1904	1 85	1 50
1877	3 70	1 53¾	1905	1 61	1 27
1878	1 87½	78¾	1906	1 64	1 58
1879	1 28¾	63⅛	1907	1 78	1 58
1880	1 24⅝	71¼	1908	1 78	1 78
1881	1 01¼	72½	1909	1 78	1 43
1882	1 35	49¼	1910	1 43	1 30
1883	1 24¾	83¼	1911	1 35	1 35
1884	1 15⅝	51¼	1912	2 00	1 30
1885	1 12⅝	68	1913	2 50	2 00
1886	92¼	60	1914	2 50	1 45
1887	$ 90	$ 54	1915	2 25	1 35
			1916	2 60	2 25

Notice to Our Subscribers

This Magazine is published in January, April, July and October of each year.

It is intended, especially, as a book for reference in all matters concerning the Oil and Gas business, and we are glad to receive items from friends regarding the same.

The attention of the advertising public is called to the particular advantages our Magazine possesses as a medium between them and the general public, combining, as we do, the romance of the business with the sterner, drier facts and figures which necessarily go with it.

If you like the Magazine, speak to your friends about it; if you have any criticisms to offer, or improvements to suggest, call our attention to them. Each number will be complete in itself. Our usual high standard will be maintained.

Copies of this Magazine may be found on file in the British Museum in London, England, and the New York Public Library, 42nd St. and 5th Ave., New York City.

The price to subscribers is $1.00 for two years; single copies, 15c. Foreign subscribers will add, for Canada 24c, and for all other countries 40c for postage.

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For Packing Oil, Gas and Artesian Wells, are the Most Successful, Durable and Cheapest Packers on the Market. Complete Line Always in Stock.

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NOTES OF INTEREST.

The nineteenth annual session of the American Mining Congress will be held at the LaSalle Hotel, Chicago, Illinois, during the week of November 13, 1916.

The purpose of the convention will be to inaugurate plans by which all branches of the industry may work together in the solution of common problems. A general meeting will be held each morning, and the convention will then divide itself into Precious Metals, Iron and Steel, Oil and Gas, Lead and Zinc, and Coal Sections, each discussing subjects of special interest to that branch of the industry.

The convention will occupy two whole floors of the LaSalle Hotel, and such space as is not utilized for meeting places will be available for exhibits or reception rooms by those directly interested in the convention.

A program of varied interest is being arranged and the largest convention in the history of the congress is expected.

About five years ago the Goodyear Tire and Rubber company began to develop tires to fit the peculiar requirements of the aeroplane. It was early discovered that resiliency was an important factor —that a live, springy tire actually aided the machine to get off the ground and helped to absorb the shock of landing. So Goodyear engineers began to experiment with cord construction, with the result that Goodyear cord tires for aeroplanes have been refined to a point of efficiency equal to that of its successful big brother for electric and gasoline cars.

The Leidecker Tool Co., of Marietta, Ohio, have on the market an improved chain mounting for portable boilers. This mounting is the least expensive and most reliable mounting for portable boilers of the type used in the oil and gas fields.

This mounting can be adjusted to fit any make of boiler while in the field in a few minutes—no tapping of holes or the services of any experienced labor to apply same to boiler.

When not in transit the chains are so made that they can be quickly removed if desirable, and used for logging chains or for any other purpose required.

Glycerine Fatality.

On Thursday afternoon, June 1, a nitroglycerine explosion occurred five miles southeast of Tulsa, Okla., on the Jenks road. Two men, Wayne Ruth and Carl Classon were blown to atoms. Their automobile was scattered in bits about the country. They had a load of 3000 quarts of nitroglycerine and having driven into a rough place in the road the stuff was set off by the jar, it is supposed. A school house 300 feet distant, was wrecked, the window glass in houses was shattered for miles around, and Tulsa was shaken.

The rig and nitroglycerine belonged to the American Torpedo Co., of Bartlesville, where the victims, who were single young men, lived.

"NUTTINDIDDINNOW"

BY J. LeROY TOPE.

"Nuttindiddinnow"—with a frigid little bow,
Said the maid behind the wicket office door.
"Come again," I said, "my dear,
For your meaning isn't clear.
I'm a salesman—Mr. Dyer—
And I want to see the buyer,
You know I've tried to see him oft before."
Said she, "I beg your pardon;
You see I took your card in,
And the buyer looked it over with a smile,
While I stood all patient waiting,
And he still kept on dictating
Lists of **orders** that would reach about a mile;
Then he finally looked at me,
Saying 'heavens, don't you see
I'm too busy—anyhow,
There is Nuttindiddinnow.' "

Nuttindiddinnow;—shades of Rockfeller's brow.
What's the world a-coming to I'd like to know?
Buyers in their office locked,
Send a message "fully stocked;"
Salesmen get no chance to tell 'em,
Even what he's got to sell 'em,
And they get the same old story where'er they go.
Tell me, Mr. Buyer, will you,
Is it really goin' to kill you
Just to step outside and see us now and then?
We all know your time is precious,
Course it is—oh, goodness gracious,
But how about your mornings up till nearly ten?
Waste of time, and why begin it,
Time that's worth a plunk a minute?
Slumbers on your lordly brow,
Whisper—"Nuttindiddinnow."

Nuttindiddinnow—So I make my parting bow
To the Buyer's little maiden, meek, polite;
Take up my samples and skiddoo,
Feeling most tarnation blue,
Thinking things I really hinted,
Far better thought than ever printed,
Till they haunt my tired slumbers every night.
Next morning comes the Boss' letter,
Saying "Charley, guess you'd better
Send us in some decent orders now and then."
And still you ask if Drummers drink?
Why don't you ask if Thinkers think?
Drummers aren't human—they are only men.
But a Buyer reapeth glory,
Spittin' out that darned old story,
"I'm too busy—anyhow,
Say there's Nuttindiddinnow."

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CONTENTS

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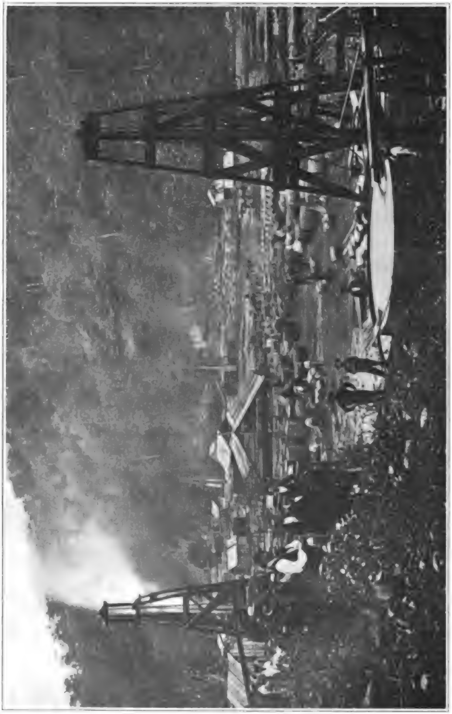


THE TARR FARM

This farm was one of the most productive on Oil Creek. The reproduction presented here shows the famous Phillips well and the Woodward well in the foreground. These wells were only 35 feet "side by each" and trouble resulted. The owners could not agree on a sale or adjust their differences and adopted drastic means of reprisal by letting water in on the rock when one thought the other was getting more than his share of oil. This came near ruining both of the wells and the smaller wells on the farm proved more profitable than the two gushers.

LOOKING BACKWARD.

Through the Vista of Fifty-Seven Years in Oil. Col. Drake's Name Secure in History. Random Notes of the World's Most Civilizing Commodity.

By C. R. Wattson.

Fifty-seven years have passed into time since the primitive drill, made by the famous "Uncle Billy" Smith, penetrated the oil bearing rock on that Saturday, August 27, 1859, which date is written in letters of gold as the time the first well was drilled successfully by the artesian process and which gave to civilization the volatile and inflammable substance that has so wonderfully advanced the arts and sciences, trade and commerce; and has illuminated the world with a cheap light; lubricated its machinery and finally brought into existence the motor car that has revolutionized the mode of travel. With the main highways being covered with brick which has become the desideratum of the times it will be possible to cover long distances with comfort and rapidity in any season of the year and passenger trains operated by steam will be regulated to the "has been" class.

From a few barrels of oil produced in the year 1859, the output has steadily grown until the yield in the United States in 1915 reached the enormous figure of 281,104,104 barrels with a value, in its crude state, of $179,462,890. While this is an increase of 15,000,000 barrels in production, compared with 1914, yet the value fell short $35,000,000 due to the lower prices received in 1915. The present year promises, however, to smash all records both in money and production. The latter it is expected will go above the 300,000,000 barrels mark.

The essential elements of Colonel Drake's career are now so well known as not to need an exhaustive rehearsal here, yet, it is well, at least, once a year, as the anniversary rolls around to give a brief resume of the main points in his life and the marvelous growth of the business he founded and to point to the vast wealth created from the little well drilled to a depth of only 59½ feet in the memory of many still living, "lest the rising

generation forget" the great benefits they have received and fail to appreciate the domestic and utilitarian conveniences, through a gradual evolution, have become so common in this age.

The rapid spread of education among the masses in the last century made the necessity for a cheap artificial light an imperative need. Nature had the elements for such a light and other products secretly stored within its subterranean vaults. It had been there since the stars sung together, but how was man to know it was there, who was to tell him? Providence, it seems, always raises up a plain mortal for all great undertakings where man is to be benefited and in this instance Edwin L. Drake, it would seem, was the one to be honored in being selected to drill the first well. The life of this man was uneventful until he came in contact with a man named James M. Townsend, a banker of New Haven, Conn., into whose society he was thrown at the Tontine Hotel where both were boarding, Drake having been married and lost his wife some years previously. Townsend had helped promote the Pennsylvania Rock Oil Co., formed for the purpose of gathering oil from the springs located near Titusville, Venango county. A few years afterward, when prospects looked anything but bright for the company, Townsend, notwithstanding his amenities in his association with Drake did not hesitate to unload on him a portion of his five hundred shares that he held, accepting $200 for the same that his friend had deposited in his bank. As Drake could not have had the slightest idea of what he was buying, the transaction indicates the child-like faith that he placed in the propositions of his alleged friends which led to his final financial undoing in Wall Street.

With the purchase of the Pennsylvania Rock Oil stock the first step was taken that finally led to the discovery that has made the name of Drake famous throughout the world.

About the first of 1857 Mr. Drake took a second wife in the person of Laura Dow, of New Haven, a young woman of good family and excellent character, she proved a friend and companion in prosperity, and a staff to lean upon in the gloomy days of ill health and adversity that followed. She survived him thirty-five years.

As time passes many stories will be manufactured and credited to Col. Drake, a la Lincoln, but the following has come down to us approved by the censor as being absolutely true:

"The future benefactor of his race sat upon the wide old porch that shaded the entrance to their plain abode. The autumn sun shone down upon his head, and the autumn breezes heavy with the fragrance of the fields lulled him to sleep, and sleeping he dreamed. With his brother, in fancy, he raked the dry stubble of the wheat field. Together they tugged and toiled, and with infinite labor they had raked a great stack of straw into a corner, nearly half a mile from the house. Then for a bonfire! While his smaller brother watched with gleeful anticipation, Edwin touched a match to the pile. They watched

it a moment in ecstacies, but their mirth was soon turned to horror, when their stack, consumed to the ground, continued to blaze and burn. They exerted all their strength to quench it, but in vain. The devouring flames rose higher and higher, the fire burned deeper and wider. It followed their receding footsteps; and completely terrified they turned and fled to their mother. When they reached the house, Edwin breathlessly and guilty, buried his face in her lap and confessed the deed. She led him quietly to the door and after watching the flames a moment she said calmly and without reproof: "My son, you have set the world on fire."

Nearly thirty years later these words of his mother were vividly recalled by the burning of his oil tanks a few weeks after the first well began to produce. When the tanks burst and the creeping flames spread over the surface of the creek, it seemed to him in the excitement of the moment that the words of his mother were in a sense being fulfilled. At any rate the incident recalled the dream."

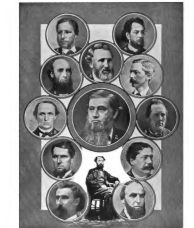
During the summer of 1857 Mr. Drake was compelled to take a layoff from the position he held as conductor on the New York and New Haven R. R. on account of his run down condition and this gave him leisure time to make some inquiries regarding the investment he had made in the stock of the Pennsylvania Rock Oil Co., and he became very much interested in the subject of petroleum.

In December of 1857, Mr. Townsend, who had been elected president of the board of directors, suggested to Mr. Drake that he make a trip to Venango county, then practically a wilderness. This he did and came back very much impressed with the possibilities of the work and was eager to embark in the enterprise. In the following spring Drake with his family arrived in Titusville then a small backwoods village of possibly 250 souls.

The difficulties that Drake encountered in getting down the well that established the greatest industry in the world today need not be dwelt upon here as it is a familiar story. That the feat was accomplished by his pluck and Yankee stick-to-it-ive-ness history has accorded him credit.

The spot where the well was drilled proved to be the shallowest to the oil bearing rock on Oil Creek and from this fact it has been said that Drake was guided by Providence to that spot and that if some one of the other places had been selected the depth would have precluded the drilling to the rock bearing oil strata, and the discovery of drilling wells for oil by the artesian process would have remained a mystery to a time no one could predict.

The strangest part of the life of this man was his failure to follow up his success by taking up leases that could have been secured for the asking. It would seem, however, that his work was completed and like other great benefactors of humanity he profited nothing by his great discovery. Moses was the great leader and law-giver of his race, he was given a view of the promised land but was not permit-



GROUP OF OIL MEN OF THE EARLY DAYS WHO SHOULD LIVE IN RESPECTFUL MEMORY OF THEIR SUCCESSORS.

No. 1—Col. E. L. Drake,

No. 2—Dr. F. B. Brewer,
No. 3—Jas. S. McCray,
No. 4—Geo. H. Bissell,
No. 5—Col. E. A. L. Roberts,
No. 6—Wm. H. Abbott,
No. 7—Col. R. B. Allen,
No. 8—Capt. A. B. Funk,
No. 9—Marcus Brownson,
No. 10—John Fertig,
No. 11—Henry Harley,
No. 12—C. D. Angell,
No. 13—Orange Noble.

ted to enter therein and filled an unknown grave on Mt. Nebo. Columbus took a chance and discovered a new world and was made to suffer for so doing. Even the country he was the means of having opened up for the white race bears another's name. He was pleading before King Ferdinand for the fulfillment of his promise when the grim reaper struck him.

In 1860, Drake was elected a justice of the peace for Titusville and also bought oil for Shiefflen Bros., of New York, the two occupations paying him about $5,000 per year. On his arrival in Titusville he fortunately had the good sense to purchase twenty-five acres of land from Jonathan Watson which increased very rapidly in price as the news of the oil strike had percolated slowly to the outside world and a rush had started for the oil country equal almost in extent to that of the gold excitement of 1849 when every state and every county turned out its quota for California. This land became very valuable in after years when it had passed into other hands.

In 1863 Col. Drake disposed of his real estate and left the oil region never to return again in life, but his remains were brought back to the scene of his trials and success several years ago and they now lie in beautiful Woodlawn cemetery, in Titusville, marked by the artistic memorial erected to his memory by the late Henry H. Rogers, who was one of the great generals of the Standard Oil Co., and to him was due many of its great achievements. Mr. Rogers was one of the earliest refiners on Oil Creek and he died in 1906.

The reason for Col. Drake leaving the oil country has never been satisfactorily explained by the local historians as he was comfortably settled and deriving a good income from his work and interests. Ill health and his wife's desire to get back to the east is given as the logical reason. He took with him about $20,000 which was, no doubt, considered by him a likely sum, and sufficient for him back in civilization. Unfortunately, he was again induced to invest his savings in oil stocks, that were being floated by Wall Street sharks, and his money was soon swept away. From that time on things went bad with him until he and his family were suffering for the actual necessities of life. Through a mere chance, Mr. Z. Martin, of Titusville, met Drake in New York City and learned of his distress. Mr. Martin bought him a good meal and tendered him $20.00.

On his return to Titusville Mr. Martin called a meeting of oil men in the Corinthian Hall, where he touchingly explained the helpless condition of Drake and his family. The response was immediate and resulted in $5,000 being raised for immediate relief.

In 1873 the legislature of Pennsylvania passed a bill giving Col. Drake a pension of $1,500 per year which his wife also enjoyed up to her death. Colonel Drake died at Bethlehem, Penna., November 8, 1880, having been an invalid for twenty years.

The name of Drake will always be the central figure in the discovery that has placed petroleum in the niche of fame as the greatest commercial commodity of the age,

around about which the other men of that day will shine only as a borrowed light from the man that made their success possible.

With an abundance of oil the next proposition to interest man was the transportation problem. The business had outgrown the system of barrels and teaming, and the result was the birth of the pipe line. The first pipe line was 2¼ miles in length, the pipe was made of wrought iron and was 5½ inches in diameter. The line proved a failure for the reason of the construction of the joints they would not hold the oil. The next line was laid from Pit Hole to the railway at Miller Farm by Samuel Van Syckel. From this small beginning has arisen the magnificent system of gathering the oil from the wells and piping it to the refineries no matter where located.

Soon after the Van Syckel line proved a success another line was built by Henry Harley and successfully operated between Benninghoff Run and Shaffer farm on the Oil Creek R. R. The teamster saw his job slipping away from him and every obstacle, except murder, was thrown in the way to prevent this pipe line from being brought to efficiency. Like the development of all utilities and progressive ideas, it could not be arrested. The railroads now became active in competition for the trade and assisted in building pipe lines to be utilized for their respective businesses. The Pennsylvania Transportation Co., with a capital of $1,700,000 operating nearly 500 miles was the largest. The board of directors was composed of leading railroad officials; among them was Jay Gould, and Col. Thos. A. Scott with Henry Harley as active field man. It was not long, however, until new ideas were born and pipe lines were projected to Cleveland and Pittsburgh and eventually to the seaboard. This brought opposition from the railroads, who like the teamster saw their freight trade in oil getting away from them. This led to bitter fights but again the iron heel of progress went forward.

With the development of the handling of oil the other branches of the industry were likewise active. In the 60's and early 70's there were only a few refineries mostly located on Oil Creek and nearby points and these were imperfect in construction and equipment. Many of them turned out refined oil of such bad quality as to involve the consumers of such oil in great danger, so that even a slight carelessness or inadvertence in the handling resulted in explosions and fires, often causing death and serious destruction of property. Then the man of the hour came into the business in the person of John D. Rockefeller, who saw the necessity of a cheaper and better light for the masses. At the age of 26 years he established a small refinery at Cleveland and his wonderful career was begun. There are few men living today who have followed the trend of the oil business through its various stages but what will admit that through the efforts put forth by Mr. Rockefeller and the coteries of persons that he drew around him who had become prominent in the affairs of producing and refining of oil, that he as each crisis arose in the hazards of

the work were met and successfully guided to a permanent basis. The development of the business required a strong corporation embodying not only great financial strength but commanding also great executive ability of the highest order to accomplish the work required of it and that company proved to be the Standard Oil Co., and the greatest mistake that has been made in the legislation of "big business" was the dissolution of the Standard Oil Co. As the lawyers say it would be irrevelant to say here "why" but the truth is apparent to every fair reader of daily events.

Competition has proven the life of trade in all great commodities but there are times when it becomes destructive and results in the death of trade and so it was in the transportation of oil by the pipe line system. In the 70's pipe lines became as numerous as fleas on a mangy dog and the demand for a strong company with plenty of capital was apparent. The Fairview Pipe Line, was one of the many lines operating in Butler county which was getting to be the great producing centre. It was organized by Capt. J. J. Vandergrift and Geo. V. Forman (their first line was operated under the name of Vandergrift & Forman). These men were of exceptional ability and far-seeing, they recognized the futility of so many little companies in their cut-throat policy and immediately adopted a plan of consolidation. This plan was carried through successfully and the nucleus of the great company that was to follow was formed. Under the name of the United Pipe Lines, Mr. Vandergrift (his partner, Mr. Forman, having withdrawn from the pipe line dept.) succeeded in having merged with his company some seventeen pipe lines. This gave the new company about 3,000 miles of lines and a storage capacity of 40,000,000 barrels. Pipe line certificates were issued for the surplus oil which were dealt in on the Exchange floors, where the price of oil was made. These certificates were as good as government bonds being subject, of course, to the fluctuating price of oil.

On April 1, 1884, the business plant of the United Pipe Lines was formally transferred to the National Transit Company, which became the parent company. The officers and heads of departments are herewith given to show how busy the inexorable messenger has been in bidding them to pass beyond the dark river.

President, J. J. Vandergrift; Vice President, Daniel O'Day; General Manager, Wm. T. Scheide; Secretary, H. D. Hancock; Treasurer, John R. Campbell; Registrar, A. Pitcairn; Auditor, Geo. W. Moltz; In charge of measurement of tanks, James Robinson; Shipping Agent, Colonel E. Ford; Engineer, A. C. Beeson; Superintendent of Tankage, J. B. Maitland; Superintendent of Construction, Alfred Smedly; Superintendent of Machinery, John S. Klein; Superintendent of Fuel, W. C. Henry; Superintendent of Telegraph, W. W. Splane; Superintendent of Lower Division, C. A. Hite; Superintendent of Middle Division, S. M. Ross; Superintendent Upper Division, L. A. Stanford; In charge of Running Oil and Pumps, Upper Division, W. J. Alexander; In charge Running Oil and Pumps,

54 per minute, $41,095 per day, $1,000,000 a month, or $12,000,000 annually, and at this rate it has been figured out that in twenty years Mr. Rockefeller (with $200,000,000 now on hand as a starter) will be worth an even $500,000,000.

Well, that's a big pile of cash. It is more than my tangible assets by about $499,999,997.

And yet when we look the matter squarely in the face Mr. Rockefeller and I are worth about the same.

It is stated that he rises about 6:45 each morning.

So do I.

He eats fruit, oatmeal and a chop for breakfast.

So do I.

He walks to his office and saves car fare, but I ride, because I can afford it.

His clothing is not expensive.

Neither is mine.

He eats a modest lunch at one o'clock.

Same here.

His dinner is served at 6:30 and consists of oysters, fish, roast and coffee.

I enjoy the same sort of dinner whenever I want it.

And so what's all the fuss about anyway?

It is possible for man to get only about so much out of life. Put your straight edge down and make a careful measurement and you will find that we are all working for our board and clothes, and when the jig is up—when we're called to the great beyond—it will make no difference whether we are worth a sou or a million—the fellow with the tape line will take our dimensions and that will settle the business.

And come to think of it, Mr. Rockefeller must have a hard time taking care of so much wealth. It must worry him a great deal to know how to invest his millions. He can't have half as much fun in this world as I can.

I don't know how Mr. Rockefeller is making out, but I am having a bully good time, thank you."

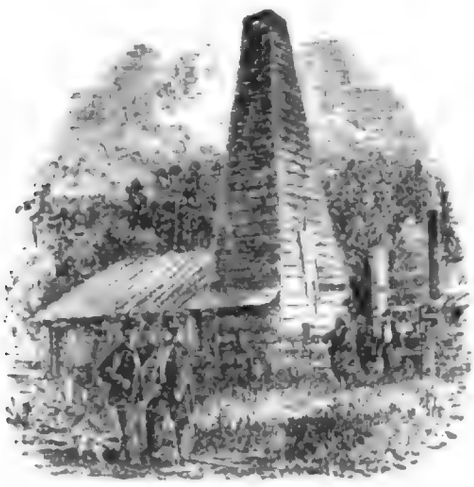
Mr. Rockefeller has said the same things as "Idler" sets forth, only he has used more profound sentences in expressing it. The following extract from his writings gives a comprehensive idea of what he thinks of the expenditure of money for the mere gratification of the so-called pleasures of life:

"The mere expenditure of money for things, so I am told by those who profess to know, soon palls upon one. The novelty of being able to purchase anything one wants soon passes, because what people most seek can not be bought with money. These rich men we read about in the newspapers can not get personal returns beyond a well-defined limit for their expenditure. They can not gratify the pleasures of the palate beyond very moderate bounds, since they can not purchase a good digestion; they can not lavish very much money on fine raiment for themselves or their families without suffering from public ridicule; and in their homes they can not go much beyond the comforts of the less wealthy without involving them in more pain than pleasure. As I study wealthy men I can see but one way in which they can secure a real equivalent for money spent, and that is to cultivate a taste for giving where the money

may produce an effect which will be a lasting benefit."

And again:

"The best philanthropy, the help that does the most good and the least harm, the help that nourishes civilization at its very root, that most widely disseminates health, righteousness and happiness, is not what is usually called charity. It is, in my judgment, the investment of an effort or time or money, carefully considered with relation to the power of employing people at a remunerative wage, to expand and develop the resources at hand, and to give opportunity for progress and healthful labor where it did not exist before. No mere money-giving is comparable to this in its lasting and beneficial results.



DRAKE WELL

"A man of business may often most properly consider that he does his share in building up a property which gives steady work for few or many people; and his contribution consists in giving to his employees good working conditions, new opportunities, and a strong stimulus to good work. Just so long as he has the welfare of his employees in his mind and follows his convictions no one can help honoring such a man. It would be the narrowest sort of a view to take, and I think the meanest, to consider that good work consists chiefly in the outright giving of money."

Let it be noted that Mr. Rockefeller has never hoarded his money but has invested and re-invested in the work of the various companies that he has been connected with. Labor has been remuneratively employed, the country developed and happiness and prosperity increased thereby. The success of the Standard Oil Co. was due solely to the wise economies introduced in the manufacture and transportation of crude petroleum and its skill in merchandising its wares and creating markets in every part of the world.

Mr. Rockefeller has never boasted of what he has done or what he purposes to do. He has been patient under criticism of the past and now in the evening of life his good qualities and beneficent character are freely recognized, especially is this so in the oil country where his life and work is best known. He long ago recognized the mere possession of wealth of itself makes no man great. He has given away many millions, without ostentation, and good will result from these gifts for generations to come in building the foundation of all civilization—education.

How transitory is everything pertaining to human achievements; what little thought is given to the great deeds of the past in this present age. The newspapers only print accounts of the unusual, the extraordinary, the abnormal, the terrible

Bullion--Clintonville Field.

A Sketch of this Once Famous Gusher Zone--Story of the Second Invasion--A Trip Over the Old Trails--Sights and Scenes by the Way.

By J. L. Hunter.

IT IS NOT the intention of the writer in contributing this article to the Oil and Gas Man's Magazine, to give a detailed story of the field's early history as it has been written from most every standpoint, but on the other hand to cater to the men who in this day are keeping the pump and walking beam going.

But a very few of the operators that figured in the Bullion excitement are with us today. C. D. Angel, who step by step, at a cost of thousands of dollars, demonstrated that oil bearing sands, as a rule, constituted belt lines with trend running west by south. Through lower Venango county, drilling a well here and another there, he finally arrived at the Allegheny river at a point where Scrubgrass creek, flowing down through a narrow valley, empties into the Allegheny river. At the mouth of the creek lay Belle Island, not a vestige of which now remains. To the traveler, in crossing the modern iron bridge that spans the river at Kennerdell, and pauses for the moment to gaze on the water flowing placidly along, to be told that fifty years ago there was within range of vision, an island on which stood a score of derricks, oil tanks and the necessary machinery for producing oil, it would have been, to him, an incredulous story.

Across the river from Scrubgrass lay the William Witherup farm on which a number of wells were drilled during the early 60's that are producing today.

A decade later, the late T. W. Phillips, a believer in Angel's doctrine, leased several farms on the south side of the Allegheny and began a vigorous drilling campaign, but with little success, until after he had sub-leased twenty-five acres of the Gealy tract to R. C. Kundle. His first location was on Bullion Run, a tributary of Scrubgrass creek, the location made one half mile from its confluence with the creek. The well flowed 300 barrels the first 24 hours, which saved the day for Phillips, as he was at this time without funds to carry on developments. When the news flashed over the country of the Kundle strike, there was a general stampede for Bullion Run and money was on easy call for development purposes.

Next came Gealy No. 10, a thousand barrel gusher that set the operators wild. One mile ahead, the late Shedrick Simcox laid off a section of his farm in town lots, which were picked up regardless of price and soon a mushroom city sprung up which was given the name of Summit, owing to the high elevation on which it was located. Summit City is but a memory now, the only building that remains, a link between the past and the present, is the lockup, built of 2x4 scantling, now used as a stable. The trend of development was towards Clintonville, a little country town lying on an elevation four miles distant from Summit City. South from the latter named town, separated by a wide and rocky ravine, lay the Berringer farm on which a number of flowing wells were struck. Here sprung up another settlement which was christened Dean City. To say that the towns were clothed with righteousness would be bearing false witness against them, it being said the majority of the people residing in both camps vied with each other in hitting the high places on the wide and straight road of scripture lore. Between the two towns a graveled walk was constructed, called the "Devil's Lane," and woe betide the man or woman trespasser with a month's salary on his or her person.

The climax in development was reached with the striking of the famous "Big Injun" on the Charles Henderson farm that hit the high mark of 3,700 barrels the first 24 hours. The location for this well was made in the corner of a wheat field by the late William Crawford, one of the prominent operators of that day. In connection with this, Mr. Crawford, in order to satisfy Mr. Henderson's wife for the wheat destroyed, presented her with a silk dress costing fifty dollars. In all, it was estimated she sold the wheat at the rate of $100.00 a bushel. It is not generally known that J. C. Keeflin, the present owner of the Antler Hotel, Ashtabula, at Mr. Crawford's request, was secreted in the woods a few rods from the well with 80 quarts of nitroglycerine to shoot the well the night it came in, Mr. Keeflin at that time being engaged in moonlighting.

There are men still living who well remember the ushering in of the "Big Injun." The people simply went wild. Whisky was carried around in buckets, all you could drink for a dime. Soon the lockup was filled with men crazed by drink, and scores were tied with ropes to trees and telegraph poles. The "Big Injun" well has proved to be a valuable asset to the territory, as it is still adding to the field's output.

Crawford No. 10 was the next gusher to fall in line and the curtain dropped to be raised at Bradford, the greater majority of the operators seeking pastures in the new Eldorado.

The years came and went. A scant few who had stuck to the territory and handled the stripper wells to the best of their ability, then began to see light ahead for, with the perfecting of the gas engine, reducing cost of production, came the discovery of a second sand formation and the field took on a new lease of life. A grand rush was

THE COUPLEY WELL

DRILLING ON THE McELHANEY FARM WITH WOOLF MACHINE
CLINTONVILLE FIELD

again made for acreage, but of a milder form than back in the 70's. The second invasion in the territory was led by Rev. J. M. Critchlow, who founded Critchlow City on the same plateau where years before stood Summit City, then he built a church wherein his field workers were wont to gather on the Sabbath day to worship. Later Mr. Critchlow sold his interests in the field to engage in the same calling in Oklahoma. The second sand formation, spreading out south and west, exceeded in acreage far beyond the belief of operators. At the present time more than 3,000 wells have been drilled, with approximately 35,000 barrels monthly production, with steady development in progress.

Present Day Operators and Field Men—Points of Interest.

From Kennerdell, the one highway by which the Bullion field is gained, skirts Scrubgrass creek for a distance of two miles to sheer off to the right to wind up a long incline, on the summit of which was built Summit City. For scenic beauty, a drive up this much traveled highway is pleasing to the eye. Then there are points of interest of more or less of an historical nature. Rounding a bend, as you leave the river, a valley scene spreads out before you. Hemmed in, as it were, by giant timbered hills stands a lone farm house with numerous outbuildings. Here generation after generation of the Witherup family were born, filled their place in life and went their way. Here the late William Witherup lived out a long and useful life, leaving as a heritage to his family this beautiful valley home and surrounding acres that has been producing oil since the year of 1865. Not only was the Witherup farm the first to produce oil in Scrubgrass township, but from the hillsides was cut the timber used in building the first court house built in Pittsburgh. Leaving the farmhouse, you cross a newly built bridge that spans Bullion Run and a five minute drive brings you to a point on the road where Jonathan Watson drilled his so-called spirit well fifty years ago. The valley now begins to reverberate with the bark of gas engines. On the hillside, to the left and fully one hundred and fifty feet above the highway and almost hidden from view by a growth of hemlock trees, a noisy gas engine tells where Andrew Rapp, a latter day pioneer oil man, drilled in his famous gusher. From this point until you arrive where the highway branches off three different ways, it is one panoramic scene of rugged, natural beauty. Many years ago where the road forks there was located an industrial settlement built to accommodate the workers in the Kennerdell Woolen Mills, an early day industry of which no vestige remains. On the opposite side of the creek there is a cluster of buildings, a National Transit pump station, that takes care of the oil produced in the district. The station is in charge of C. W. Guigon, who has long been engaged in this branch of the business. The only other habitation discernible in this section of the valley is the summer home of J. T. Miller, one of the gaugers of the district.

Here also was the terminus of a steam railroad built during the Bul-

lion excitement by men of visionary minds who foresaw great wealth in the transportation of supplies from Scrubgrass station, the starting point, to the field. With this end in view, a bridge was thrown across the river and the road graded up the valley, ties and rails placed in position and "Rollicking Jinney," the name given by a wag to the wheezy locomotive, was coupled to a two coach train and with a grunt and groan the iron steed slowly wended its way along the left bank of turbulent Scrubgrass creek. As a money maker the railroad proved to be a rank failure as one trip generally satisfied the most sedate passenger owing to "Jinney" persisting in leaving the rails entirely too often for the traveler's peace of mind.

Climbing the long incline to the open country, there is spread out before you a stretch of rolling land and the ear is again treated to the bark of gas engines, the clatter of pumping powers, while the eye follows the myriad of rod lines that lead from the powers to the wells. It was on this same elevation that fortunes were made and lost during the Bullion excitement back in the later 70's.

Practically speaking, the territory is controlled by independent operators, not a few of the land owners being interested in production. The following is a list of the producers:

South Penn Oil Company, Taylor Hoffman, George Eakin, George Ramsey, Harry Hoffman, Frank Hovis, Harry Thorn, John Montjar, J. L. Eakin, Crawford & Gregory, President Oil Co., S. Y. Ramage, Harry Lamberton, Major McElhaney, Andrew Rapp, Baum Estate, R. H. Koonce, Miller & Co., Witherup Brothers, W. B. Hunter, E. E. Corbett, George Straub, Hutchinson Estate, T. J. McElree, H. C. Foster, A. L. Sweetapple & Son, Jim Oil Co., Richard Hoffman, Earl Hoffman, J. J. Vandresser, Dewoody Bros., Sherman Smith & Son, James Hoffman, Wilson & Co., and E. G. Geoner.

Operators can be termed the "power behind the throne," but there is a legion out in front keeping the throne in a perpendicular position and the weeds cut around the border. In other words, we take our chip hat off to that greater army of fellow workers of the greatest industry on earth, in the production of petroleum—the field men. While on a trip down Clintonville way, a brigade was met and we take the liberty of enrolling their names: Homer Henderson, Dewey Berringer, F. O. Fleming, P. E. White, M. H. Dotterer, D. A. Hovis, H. F. Hovis, Fred J. McDaniel, H. H. Burtner, J. M. Cannon, O. B. Eakin, R. S. Harlan, R. H. Davis, G. S. Andre, Harry Day, Jesse Sweetapple, Bert Sweetapple, Robert Locke, J. A. McKee, R. H. Porter, Bud McKee, H. N. Kelly, F. B. Allen, K. M. Kibbs, C. P. Whiteman, Harry Hoffman, W. E. Hoffman, D. H. VanDike, J. M. Phipps, B. A. Porter, J. F. Cokean, D. M. Lynn, G. S. Stalker, S. R. Kerr, Harry Montjar, F. F. Green, C. B. Hoffman, C. J. McMullen, T. C. Hovis, Earl Richard, M. A. Banting, C. F. Baker, H. B. Whitehill, R. G. Paden and G. W. Latchaw.

OLD TIME PUMP STATION AT KENNERDELL
TWO MILES FROM RIVER

CLINTONVILLE, PA.

Sweetapple Triplets.

The Clintonville oil field not only holds first place in production among local fields, but in the production of triplets, now eleven years of age and the pride of the oil country. If the boys are not heard from in the oil game they will not follow in the footsteps of their father or grandfather, both of whom own interests in the territory.

The hoops are tightened on this barrel of petroleum news with a few words about William McKee, or "Billy," as he is called by the Clintonville oil boys. William McKee is one of the gaugers of the district and stands at the head of the veterans, having rounded out 43 years in the service, which prefixes the word "pioneer" to his name, and a more popular thief "toter" never carried a measuring pole.

Billy was working in the field before rock-ribbed Bullion hills gave up their treasures and it can truthfully be said of him that no work was too difficult for him to undertake. The following story of his younger days verifies the truth as to his resourcefulness in time of need:

William was raised by his grandparents, so the story runs, and being full of vim and get there, petty misconduct on the part of the household was usually laid to Bill. One day grandpap's absence was taken advantage of by a brood sow, who began a thorough investigation of a patch of wheat and was caught in the act by Mrs. McKee who, with Billy's assistance, undertook to remove the incumbrance. In spite of their united efforts the animal persisted in holding the wheat patch against all comers, though the fence was laid down at a number of different places for exit. With the winding of his grandmother, Billy bethought himself of his grandpap's rifle; he would tickle Mrs. Hog up a bit. Armed with the old deer gun he watched his opportunity and the sow running her long snoot above the growing wheat to take observations, Billy pulled the trigger and there was one less porker for the winter meat barrel. Naturally, when Grandpap McKee arrived home the trampled wheat came under observation and Billy was called up on the carpet for explanation. With the telling of the tale in a straightforward way, Mr. McKee said: "Why didn't you kill her?"

"That's just what I did, grandpap, and she's lying out there in the wheat patch."

It is needless to add the subject was dropped for all time.

SEEN THROUGH GLASSES

By Frederick M. Riegraf.

Author of "With a Dog's Fidelity," "Gustav Groarti" And "A Morning Swim," Etc.

HOWARD GIBSON flung himself lazily into his big Morris-chair. Picking up a book, he settled back to enjoy an evening in his room. He had just finished law school the year before and had been admitted to the Philadelphia bar, so now he was "a full fledged." As yet he had no clients, nor had done a thing of note, but he was not worrying on that source for two reasons: one was that he had a fairly good income left him by his parents and the other was that Lawyer Conard, an intimate friend of his father and a lawyer with a long, successful career, was going to take him in partnership in a month or two.

Gibson had just got interested in his book when there came a knock at his door. Rather impatiently he flung the book on the table and answered. His landlady was there with a package for him.

Thanking her, he again sank in the comfortable cushions of his chair.

"It is from Jack," he murmured, with a smile. "I wonder if he is sending me something in the eye line."

Jack Cleaves was an old school chum of Gibson's, and had studied to be an eye specialist. Gibson unwrapped the package, and to his surprise a pair of glasses met his gaze.

"What the dickens did he send me these for? Does he think my eyes are strained from over-work?" he muttered, with a puzzled laugh. "But here is a letter, we will see what he has to say:

Dear Gib,

I am sending you a pair of glasses and while they look like just plain eye-glasses, you will find that they are different, for they are remarkable magnifying, as you will find out if you will take the trouble to put them on. Try them,

Your old chum,

Jack."

Walking to the window Gibson put them on. Then suddenly he straightened up, for the whole street and everything on it took on gigantic proportions. He could see the smallest details now—things that were before invisible. He took up an evening paper and started to read it; the type stood out huge and black. Gibson was now thoroughly interested in the glasses.

"Well, I think they are special-

ized all right; yet—they do not hurt my eyes," he muttered aloud. "Anyone wearing these would have no need for a telescope. I know what I will do, tonight I'll go to a movie and see how they will show up the pictures."

Suiting his words with action, he donned his hat and coat, and went to a first-class moving picture "palace."

The first picture was a side-splitting comedy and Gibson saw it all many times larger than the rest of the audience. He also saw what was not intended for the spectators, for he saw plainly how they pulled off some of the actions that were supposed to be mystic, and it would have spoiled the whole picture could everyone have seen it as Gibson did.

The fourth picture was a scenic series, taken from the platform of an observation car on a single-track railroad that ran through the mountains in Western Pennsylvania, about a hundred miles from Pittsburgh. To Gibson this picture appeared just as if he were sitting on the platform of the car looking through a strong field-glass.

The train was winding its way on the side of a steep mountain, when suddenly Gibson sat up straight in his seat. On the mountain across the valley he saw something creeping through the bushes. It struck Gibson that the person did not want to be seen.

No one else saw it, and only for the powerful glasses he would not have noticed it either. Gibson's heart throbbed as he watched the person, for he was fully convinced that it was a human being, creeping through the underbrush; all at once it disappeared—where, he could not tell; it seemed as if it went into the side of the mountain. Then the train turned a bend and he lost sight of the place. He closely watched for the name of the first station as it came within reach of the camera; he saw it; took careful note of it, and then somehow all the rest of the pictures bored the young lawyer. Although he stayed it was not for what he was seeing—he was impatiently waiting for the one picture to reappear on the canvas.

At last it came. This time Gibson took careful notes of the name of the railroad, the starting point—in fact everything that it gave. He eagerly watched for the two bush-covered mountains on each side of the deep valley. The whole scene had taken a strong hold on him. At last the train reached the looked-for valley.

Then—they reached the place—he again saw the creeping object worming its way through the bushes. He was certain now that it was a human being. But why should it crawl through the undergrowth on its hands and knees? There was a path close by. Why did it not take that? Gibson carefully noted the point and the lay of the land and everything that he could, before the object again disappeared in the side of the mountain and the train once more turned the bend. As soon as the picture ended he left the place.

All the way home the scene haunted him—he tried to banish it from his mind, but it seemed there to stay. When he reached his room he got his atlas and looked the district up. He found it was a thinly settled part of Pennsylvania, among

some of its roughest mountains. That night he dreamt he was creeping through bushes on his hands and knees.

The next morning he called on Lawyer Conrad and they talked over the coming partnership, at least the old lawyer did; but Howard's mind was more on bushes than on law and partnership.

"I think you will be successful," spoke Conrad.

"Yes, but I would like to be there and see where they went," absent-mindedly answered the young man.

"Be where?"

"Why, on the mountain across the valley."

"What mountain and what for?"

"To see where they went to."

"Who went to? What on earth are you talking about?"

Howard came to himself with a start, turned red as fire, and he rose and left the office, stammering something about being in no mood to talk business. The old lawyer shook his head, evidently puzzled at the foolishness of the young.

The scene preyed on Gibson's mind all the rest of the day. About four o'clock in the afternoon he ate his supper and went to his room. He threw himself down in his chair and tried to read, but finally, with an exclamation of disgust, he flung the book on the floor and started to pack his suit case. Then he slipped a revolver in his pocket. He went to Broad Street Station and bought a ticket for Pittsburgh, and found he had fifty minutes to wait for a train. So he sat down on a seat to read. He had not been sitting there two minutes when he sprang to his feet, rammed the magazine in his pocket, and left the station. He hunted up a store and bought an electric pocket-lamp.

"If I find a hole in that mountain it is likely to be dark and this may come in handy."

The next morning found him on a train leaving Pittsburgh on the single-track railroad, having checked his suit case in that city before he started.

It was a little past ten o'clock when his eager eyes recognized the spot he was looking for, from the window of the car as the train passed it. He got off at the next station and walked back along the track. At last, here was the very spot, and he stood a while surveying the scene. He had made no mistake, for there on the opposite mountain across the valley he recognized the rocky slope, as the one in the picture. The scene looked even more barren than it had on the screen.

Carefully he wound his way down the mountain into the valley and then along until he was, as nearly as he could judge, at the spot he wanted. Then he worked his way slowly through the bushes until at last he found the trace of a path, which showed signs of being recently used. He followed this, finally coming to the mouth of an old coal mine.

Getting out his pocket lamp he entered. The air within was musty and foul. Carefully he followed the passage until he came to a large chamber, where coal had been mined. He at once saw that this was a dangerous place, for the pillars of the mine had been what the miners call robbed—that is, the miners had cut out nearly all the coal pillars away, and the few re-

maining ones showed evidence of decay.

Gibson halted in the mouth of the passage when he saw this and a wave of disgust swept over him. Was this all he had come for? Half turning, he was going to leave the place, calling himself a fool and a few other uncomplimentary names, but somehow he could not move—some irresistible force seemed to be dragging him on. He fought against it, but still it held him in its grip.

Flashing his light over the cave, he could not see a sign that a human being had been in the place for years. There were five other passages leading from the old mine, besides the one he stood in, but there was nothing unusual about any of them.

Carefully he made a mark on the one he had come through. Then he examined each one in turn, flashing his lamp in each. Finally he reached his starting point in disgust—but again that strange impulse won, and he stood still, his brain puzzled what to do next; then his face brightened.

"Why didn't I think of it before?" he said aloud.

He reached in his pocket and drew out the glasses. Then flashing his light on the ground he examined it carefully, and through the magnifying lenses he saw traces of footsteps in the coal-dust, they leading to the first passage to the left, which ran parallel with the side of the mountain.

Slowly, with one hand on his revolver and the other holding the light, he worked his way along the passage until it began to grow lighter. Soon he put his electric lamp in his pocket, as he could see without it. He turned a slight bend and then stopped in amazement—for there about twenty yards from him, in a small chamber-cave, he saw a woman sitting on a rude bench.

He beheld a woman, whose beauty made him draw his breath sharply through his teeth. She was of medium build, her perfect figure was fully outlined by a neat well-fitting dress. She had black hair with a slight curl in it, which was a little wiry from neglect, but it was abundant. Her black eyelashes hung over her soft velvet cheeks; a graceful throat was partly exposed by the low cut of her dress; her ears looked like small transparent shells.

He took off the glasses and she looked even more lovely to his naked eye.

Was she asleep? Her eyes were closed. Was she a prisoner in this old deserted mine? Surely she must be, he decided. He drew up his figure like a knight of old as he made up his mind that he would rescue her.

For, his thoughts continued to run, if she were not a prisoner, why was she there? Yet she seemed free. Perhaps she did not know the way out. By this time Gibson had discovered where the light came from—there was a fissure in the top, long but narrow, that let in the daylight. He had no suspicion that she was anything but a prisoner, so stepping forward he said:

"Miss, I w—,"

His polite speech was cut short. With a scream she sprang to her feet, her eyes looking into his, her

hand on her breast. Ah, what eyes; they looked as if they were bottomless to Gibson. She drew back slightly, fear on her face.

"Who are you?" she stammered.

"A friend," he answered. "Do not be afraid, but if I can in any way help you, tell me how."

She looked at him with a doubtful expression; and she seemed to hesitate, yet there seemed to be a suppressed eagerness in her face and manner. Finally a cunning look crept into her eyes, unperceived by the man.

"How can you help me?"

"Why—," he stammered, a little taken back by this unexpected question. "To get you out of here. Surely you are not staying here of your own free will."

"No. But I have powerful enemies—men who would crush you and me. You had better go before it is too late."

"Go and leave you here at their mercy? I am not made of that kind of stuff. I do not fear your enemies, no matter how powerful they may be. Come, I am willing to be your friend, and your enemies will find that there is a law in this land."

She paled and shuddered, while her eyes looked at him with a glance that puzzled him. But she prepared to follow him.

"I am ready," she said in a dull strained voice.

Together they worked their way back through the dark passage and out over the mountain. Gibson, speaking words of encouragement, and hope, to which she answered in monosyllables or not at all.

When they reached the station they had a long wait for a train, but it drew into the station just as the sun was sinking. She drew closer the veil she had on, while her eyes roved nervously as they entered the car.

On the way to Pittsburgh he told her how he happened to find her and all about himself, but she seemed strangely silent and did not offer to return his confidence.

The nearer the train drew to the city the more restless she became; as they left the station a policeman suddenly bobbed around the corner and nearly ran into them. She gave a gasp and staggered, Gibson caught her, thinking she was going to fall.

"Come, we will get something to eat, for you are weak, and I am nearly starved," he said.

He received no reply, so he led the way to a restaurant, where she chose the most secluded table and sat with her back to the other tables. They both ate a good meal. As she finished, she picked up a newspaper—then her face brightened.

"What time is it?" she asked.

"Nearly nine,"

"It goes at eleven," she murmured, partly to herself.

"What goes at eleven?"

"A boat for New Orleans. Once I reach there I have friends that I would be safe with."

"Why, you are safe here—your enemies would not dare molest you in this large city."

"You do not know them. They are great and powerful."

"Well—my time is my own and if you say New Orleans, to New Orleans we go."

"Oh—you need not go," she gasped nervously. "I can go alone."

"And let your enemies overpower you before you get there? Not I—I will see you safely with your friends."

"B-but—," she seemed at a loss what to say; there was a perplexed look, mixed with admiration on her face. "I do not want to draw you into this tangle and get you in er-rr—to make a pile of enemies for you."

"Let me see the paper."

She handed it to him like a child; she was angry with herself, for she obeyed this stranger against her will and it nettled her, for she was used to giving orders, where men were concerned. While Gibson wondered why he was following this woman so blindly, he knew it looked foolish and was against his better judgment, yet that same irresistible force seemed to take him on and on, where to he did not stop to reason—but just on—on with this unknown, beautiful woman.

He looked up the boats in the paper, then going to the telephone he reserved two staterooms and calling a taxi, they were snugly in their respective rooms when the steamer started down the Ohio on its long journey.

While the boat was tied at a wharf in Cincinnati, Gibson came from his stateroom and glanced towards the door of the other, hoping to see his beautiful companion, who was beginning to cause a peculiar feeling around his heart. But when his glance rested on the door—he stood still in amazement at the sight he saw—she stood in her doorway, with a man on each side, who had hold of her arms; while another, a heavy set man with a black mustache, stood in front of her with a confident sneering smile on his face. She stood straight, her face the color of chalk, a fixed defiant look on it.

For a few moments Gibson stood eyeing this scene like a statue, unable to move; then with rising anger he ran, rather than walked, to the group.

"Take your hands off that young lady," he roared. "What is the meaning of this outrage?"

"Just keep cool, young fellow and mind your own business," said the man in front, looking Gibson over.

"It is my business."

"How?"

"This lady is my sister."

"Oh—so you have found a dear brother," sneered the man, with the black mustache, lifting his eyebrows.

"No more of your insults," roared Gibson, taking a step towards the man, with clenched fists.

"I think we will have to take charge of you, too, my young spitfire," said the man, his smile leaving, as he threw back his coat, showing the badge of a detective.

Gibson turned cold and looked at the girl, but she refused to meet his gaze. In a dazed state of mind he was led off to prison. He had not been in the cell long before the man with the dark mustache returned with a uniformed captain of police.

"My man," began the detective, "we have no right to take you from this state without the necessary requisition papers. We already have these for the girl and we must start for New York with her at once.

Now if you will agree to come with us, it will save time and be better for yourself."

At first Gibson was going to refuse, but he thought of the girl and of being parted from her. For all he knew, this arrest might only be a blind, to get the girl in the power of her enemies, but if he stuck as long as possible he might learn something more—at any rate he would hold the trail longer. Possibly they did not intend to go to New York at all.

He asked permission to send word to his partner-to-be, Mr. Conrad, and this was granted.

On the long journey the girl kept a dogged silence and did not even give Gibson a look.

They reached New York shortly before daylight and Gibson and the girl were placed in cells.

He sat on the bench in his cell and wondered what the girl had done, or if she had done anything at all. He sprang to his feet and paced his cell. Was this a trumped up charge made by her enemies? If it was, they would find that she had a friend who would fight them to his last breath. For to him it seemed impossible that one so young and beautiful could be guilty of a crime.

He was roused from his thoughts by the opening of the cell door, and Mr. Conrad entered, accompanied by the man with the dark mustache.

"Well, Howard," said the lawyer, pleasantly. "What on earth have you been doing to land here?"

"That is what I want to know," grumbled Gibson.

"This is Detective MacGee, of the New York force, and he wants to ask you some questions."

Howard opened his eyes a little, for he had often heard of this man as one of the best detectives in the country.

"Yes," said MacGee, "and we have come to see if we cannot straighten out this affair. For I do not think you know what and who this woman is. So if you will tell us how you came to be in her company, we will get down to business."

At first Gibson refused to say anything, but Conrad advised him to tell all, so he told everything from the picture at the movies to the arrest at Cincinnati.

"So she played the persecuted one hiding in the old mine," mused the detective, "and wanted to reach New Orleans. Well, it is lucky we caught her before she got there. Now, Gibson, I will tell you just who and what she is.

"This woman, Mabel Monroe, is a clever and brainy crook. She was born of poor parents, but she has made plenty of money and lived well through her clever schemes, using her great beauty as a stepping stone. She is also a clever actress and had she chosen that profession I am convinced that she would have been a star, but she has always kept shy of the law. Her ways of making money have been through men who thought to make her their plaything. She would lead them on, always holding them at the right distance until they, driven to madness in their passions, and being fooled by her clever acting, would let her get a grip on them, then they found they had a tigress to deal with, for she would drive them as far as she could, bleeding them without mercy.

"Now I do not blame her one bit for roping in these rich libertines, as they were the only kind she used for her prey, for their intentions were far worse than what they got, so although appealed to in secret, I have always shut my eyes to her deeds in this line. I always considered that the men got only their just dues.

"But her last deed was a mean and contemptible one, as well as a crime.

"A little over two years ago she was taken in as a companion to an invalid, in one of New York's richest families. She had a good home and pay, and I should have thought a woman like her would have been satisfied—yet—eager for such—a chance. But after she was there two years and treated like one of the family, she suddenly disappeared with over sixty thousand dollars worth of diamonds and other valuables. This is the crime for which she is now to be punished.

"We finally got trace of her in Pittsburgh, but some way or other she got wind of it and again she vanished. We now find out that she got in with the daughter of an old miner, who took her to the old mine where you found her.

"It was this girl that you saw crawling through the bushes in the picture. She saw the 'thing' on the back of the train and fearing for Mabel's safety, not knowing what the 'thing' on the train was, she tried to hide.

"I just got news of you two boarding the boat at Pittsburgh in time to catch a train and head you off at Cincinnati."

Gibson had no trouble in getting his freedom. He stayed in New York and followed the woman's case. For Mabel Monroe seemed to still cast a spell over him, in spite of his better reasoning and judgment. But her case was hopeless and it was with a heavy heart that he heard the judge pronounce the sentence that sent Mabel Monroe to prison for a term of years.

The Story of a Spring.

A ten minute walk along a narrow, well beaten path that branches off at a right angle from a much traveled highway that traverses the picturesque North Sandy valley, and the eyes of the thirsty traveler is gladdened by a spring of cool, sparkling water that is impelled from the earth by some internal force. Hundreds have drank of the cooling water, impressed with the surrounding scenic beauty and gone their way not knowing but that nature alone was responsible for the same, but such was not the case.

In the year 1861, Venango county was in the throes of an oil excitement. Two years previous Colonel E. L. Drake had drilled a shallow well on Watson's Flats, near Titusville, Pa., from which a daily production of 25 barrels was secured.

Scores there were who followed in the footsteps of the one who blazed the way for countless fortunes. In those days it was deemed absolutely necessary to insure success to locate near a creek or small stream, it being the general belief that petroleum followed water courses.

Among those who sought wealth by "boring" for oil, was Simeon S. Brown, a resident of Milbrook, Pa., who leased three acres of ground near the northern boundary of the valley, the location for a well being made on the bank of a small run that was fed by a spring a hundred yards distant. Franklin, ten miles distant, was the nearest town where supplies could be purchased. Brown built a shack for his workmen and a shed for his team. With the completion of shelter, a spring-pole was erected. Cleats were nailed to the trunk of a nearby maple tree, by which a projecting limb was gained to which was fastened a pulley and by means of a rope the drill was lifted from the hole and sand pump operated.

Drilling was commenced the first of April, 1861. At a depth of 25 feet a tremendous flow of water was struck that flowed over the top of a wooden conductor. To the inhabitants of this sparsely settled section of Venango county, the stream of water gushing forth seemed nothing less than a phenomenon, not a few coming from a distance, having heard of the wonderful well.

As nothing could be done in the way of further development, Mr. Brown paid his men off, saying they would wait a few days and perchance the water would decrease in volume when they would resume work. A few days later he drove out from Mercer to find the water, if anything, had increased in volume. At the time of his arrival there was quite a large crowd of men, women and children at the well, and when leaving, he said: "Friends, as you may know, Sumpter has fallen, a number of the southern states have seceded and President Lincoln has called for seventy-five thousand men to put down the rebellion. I have raised a company at Mercer of which I am captain. We are going down to whip the Rebs back into harness, which will take two or three months, perhaps, then I'm coming out here to drill another well." With a goodby to all he drove away.

Captain Simeon S. Brown never came back. Laid low by a minie ball fired from the rifle of a Confederate soldier, he sleeps at Arlington cemetery while o'ershadowed by spreading maples in the beautiful North Sandy valley, a stream of sparkling water still flows from the shallow well drilled by him more than half a century ago.

WHERE OIL IS KING
In Sunny Kansas.

By Margaret Mitchell O'Hara.

INSPIRED doubtless by the discovery of petroleum in Pennsylvania a year or so previously, a small company, headed by G. W. Brown, a geologist, drilled a test well about a mile east of Paola, Kansas, and was rewarded by striking oil at a distance of 125 feet. But before the new find could be exploited the civil war broke out and graver matters claimed the attention of the embryo prospectors. Later, when the country had quieted down after its strife and struggle, another company took up the work begun by Brown and his associates and developed a small field. In time other companies were formed and other fields developed, but for more than fifty years the industry did not assume such proportions as to warrant its being classed among the products or achievements of the Sunflower State—then came the record-breaking wells of Augusta and El Dorado and Kansas took her place among the oil-producing regions of the world.

In the summer of 1914 a well was struck on the Frank Varner farm near Augusta, but it was only a small well and created little excitement. At about the same time "Jim" Titus of the Titus-Higley Lumber Company of Wichita got three small gas wells on what was apparently a little "dome" west of Augusta. Then in the fall of 1915 the Stapleton well was struck at El Dorado, 14 miles northeast of Augusta, and the race for leases was on. One big well after another was brought in and the rivalry between the two towns—always in evidence—was augmented to fever heat. Both towns show a marked increase in population, that of Augusta having risen from a trifle over 1,200 to 4,000; that of El Dorado from 2,800 to 6,000. Enormous fortunes have been made and business is booming in both places. We will consider Augusta. One year ago its bank deposits were $800,000; today, $1,500,000. Seven oil well supply houses are busy and three lumber yards have come into existence since the first of the present year. In this field alone about 250 wells have been drilled or are in process of drilling. The production of these wells is very difficult to estimate, owing to the fact that many of them are not pumped to anything like their full capacity and for this condition the lack of pipe-line facilities is responsible. When the Prairie Pipe Line Company gets its new line completed to Neodosha—at present

it is operating only one—this congestion will be somewhat relieved. Unverified rumors are afloat to the effect that the Dohertys will build a refinery near Augusta. There is already a small refinery in Wichita, about 20 miles west of Augusta and Eastern capital is contemplating the construction of another, to cost $4,000,000. A ten-inch line will be laid to the oil fields and large storage tanks erected. The McMann Oil Company, which has a large acreage, will soon build fifteen tanks and hold their production for a higher market.

Different grades of oil are found, that in the Varner wells being black and of low test; in the Kramer pool, west of town, the oil is light and contains a higher percentage of gasoline. In some localities the oil is green, somewhat similar to the Pennsylvania product. This is found at a shallower depth than the black oil.

Of course, geology has played a large part in the development of the field which is approximately ten miles long and four miles wide. The Prairie Oil & Gas Company has paid $1,500 per acre for territory to the north; a few days ago the Cosden paid $1,000,000 for 960 acres and just recently the Carter $1,500,000 for 845 acres.

Men who two years ago had hard work to make a living from their farms around Augusta now cannot find ways in which to invest their money. The daily income of the Varner brothers alone is estimated at $6,000 each. A Mrs. Loomis is reported to have received $1,000,000 for a lease of 80 acres. One man turned down an offer of $75,000 bonus on his quarter section and was considered crazy by his neighbors; a week later the "crazy" man deposited a check for $100,000 given by the McMann for that same section. Many leases are held by the city, which furnishes gas to the consumers at 15 cents per thousand and from the profits is installing a sewer system without cost to the taxpayers. The town already owns the electric light plant and a city hall and library are contemplated. Eleven blocks of paving—the first in the town—will soon be laid. New buildings are needed badly as many stores and other business enterprises are carried on in tents.

The Stapleton, the initial well in the El Dorado field, is a deep sand well, but the majority of the holes in this field are shallow. For a long time various operators had tried unsuccessfully to secure leases around El Dorado, but the stubbornness and cupidity of the farmers blocked their efforts; and just here I will say that, in the parlance of the trade, the farmers around El Dorado and Augusta are considered the "toughest" in the oil regions. Finally the townspeople of El Dorado conceded the right to the city to take some leases which it did and drilled a dry hole. Then the Wichita Natural Gas Company took over the block of leases, which included nine almost solid sections, agreeing to drill to the deep sands or forfeit all their holdings. This arrangement necessitated their casing off a good well in the 600 foot sand, but they were rewarded by a big well when they had reached a depth of about 2,500 feet. Then the company paid the city $15,000

REACHING

National Tube Company's New Gary Mill

Some official information has been given out at Pittsburgh relating to the new pipe mill to be built by the National Tube Company of Pittsburgh at Gary, Ind. The plant, which will be located near the works of the Indiana Steel Company, will be absolutely self-contained and will make pipe from the ore to the finished product. It will have its own ore docks, equipped with the most modern unloading machinery, and with sufficient storage capacity to provide ore for the blast furnaces when lake navigation is closed. Four blast furnaces will be built, each with a daily capacity of 550 to 600 tons of pig iron; a Bessemer steel plant, to have two 12-ton converters; two 40-in. blooming mills, with power station and waterworks; two continuous skelp mills; a universal plate mill; a sheared plate mill, and five lap and five butt weld furnaces. Auxiliary buildings will comprise a coupling shop, galvanizing shop, jobbing shop, machine and blacksmith shops and a very large warehouse. No open-hearth furnaces are now contemplated, but any open-hearth steel to be used will be supplied by the Indiana Steel Company. The plant will have a monthly capacity of 40,000 tons or more of steel pipe, ranging from ⅛ in. to 24 in. No contracts for equipment or construction have yet been placed, but it is the intention to push work as fast as possible, and have the plant ready for making pipe in about a year from the time work actively starts.

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for its holdings, as per agreement and drilling broke out like the measles, 25 shallow wells per week being the average for a time. The number of completed wells at the present time is estimated at 250, ranging all the way from 450 to 2,800 feet in depth. Among the notable deep sand wells are the Wilson and the Robinson, making respectively 700 and 500 barrels. But this record has been cast into the shade and the field extended a mile and a half to the south by the recent strike on the Milheiser which is producing 1,500 barrels daily from a depth of 2,550 feet. From El Dorado north to the Nebraska line a number of tests are being watched with interest. The fever has infected Wichita and at least fifty stock companies have been organized there. Many of the townspeople have invested according to their means or inclination and occasionally a lucky strike vindicates their judgment.

El Dorado, from being a quiet, contented, even sleepy, country town, has developed into a near-metropolis—at least in the opinion of the natives—and staid old-timers are reveling in a bustle and prosperity hitherto undreamed of in their rural philosophy. Fancy prices prevail here also, the Roxanna, on the strength of a geological report, paying $25,000 for a lease of 960 acres several miles north and a little east of developments; one, Robert Hazlett, a prominent citizen, received $1,000 per acre bonus on his farm of 400 acres, and bank clerks, jewelers and other business men are taking in enormous royalties while quietly attending to their daily duties. The four banks claim that their deposits have been doubled in the past year; the hotels and restaurants are taxed beyond their capacity, some of the second class hotels having even closed their dining rooms because they cannot get help. Everybody is making money, everybody is happy. However, "a change has come o'er the spirit of their dream" in the shape of a falling market and production will necessarily be curtailed for a time. But those best qualified to know assert that the "slump" will be neither serious nor unduly prolonged, so the optimistic natives are not losing much sleep over the situation. This temporary cessation of activities will merely enable them to catch their breath and count their money.

THE WALKING BEAM.

(By Sandy)

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Uncle Billy Johnson Starts On a Tour of the Oil Fields--Visits Oilton--Meets Sammy Whipple a Former Friend--Tries to Settle Family Troubles.

I arrived at Drumright last evenin' and am seated in my room by a table writing of the happenin's that took place on the trip. Actually it comes pretty near bein' one vast oil field frum Tulsa clear down here with patches of dry territory betwixed. We left Tulsa after breakfast an' the train jogged along somewhat lively part of the way an' some of the way it dident. They have rules an' regulations pertainin' to railroad travel in Oklahoma somewhat different than back in Posey county. Fur instance when I go on the train at Tulsa I took a seat in a car that wuz about full of black men and women and a few children. It werent long before the conductor come along an' asked what in samhill I wuz doin' there an' I said that I was goin' down to the Cushing oil field to write up the news for the Walking Beam, an' when I told him that my name was William Johnson, late of Posey county, he sez, "bein' you're a newspaper man you oughter be able to read that sign over the door, an' dummed if the words written on that sign dident read: "FUR NIGGERS ONLY."

Conductor, sez I, back in Posey

county us niggers an' white folks attend threshin' machines, apple pearins and Sabbath skule picnics together like as though we were all one color an' we consider a black feller who don't steal chickens an' sich like, a pretty sort of a decent human bein', sez I, an' I know sum black people back home I'de a dummed sight rather sit 'longside of than sum white fellers I know of.

"You'll either take another car or git off the train at the next station, an' that's my ultimatum," sez he.

Not knowin' what he ment by ultimatum an' fearin' it meant personal injury, I did as he requested, but mentally resolved to call on the president of the railroad, if ever I run across him, an' demand satisfaction, but was prudent enough not to speak my thoughts out loud.

Shortly after this happened I was talkin' to an oil man who said that I'de better git off at a place called Oilton, which was part an' parcel of the Cushin' producin' territory, which I did.

Oilton lies in a bend of the Arkansas river an' is composed of an equal number of buildins where they sell lumber, family supplies, boardin' places an' sich like, includin' boiler-machine shops an' a Oil Well supply store, and everywhere you looked you could see oil derricks. I counted an' counted until I forgot how many when I quit, but there must have been two hundred more or less. In conversation with a pumper I asked what they did with the oil anyway. He said that his company sold theirs an' supposed other companies did the same. Being this was valuable information, for the Walking Beam, I made note of the same.

As I stood there near the depot watchin' the people come an' go, my attention was attracted to a stoop shouldered, long haired man who shuffled along like I've seen fellers with foot corns. I node that I'de seen the man somewhere an' after a while it comes to me like a powder flash that it was Sammy Whipple who run off from Cattarragus county when 15 years of age, takin his pap's old gun along an' leavin' a note sayin': "I'm goin' to Oklahoma to hunt Injuns."

I was dadburned glad to see Sammy an' Sammy was to see me. He asked all about Cattarragus county and when I told him that they were reapin' an' sowin' an' makin' cider the same as when me an' him were boys, his face took on a yearnin' look and graspin' me by the hand he sez: "Billy, I wish that pap had caught an' laced the pants off'n me that mornin' I run away, coz I've had a turrible time of it the past years." "Billy," sez he, "readin' of huntin' Injuns out'n a book an' makin' a livin' out of it is a mighty sight different. I lugged my pap's old gun clear out here to find that it were agin the law to speak disrespectful of an Injun, let alone killin' him off in cold blood, an' that the yarn I read about Red Dan, the Scout of the Arkansas River, was a tarnation lie, so I hired out to a mule raiser fur my board an' clothes. When his seven girls growed up I married the sixth one named Susan, whoom a travelin' sky pilot made me promise to feed, love and mind, drat his picture, an' Susan never 'lows me to forgit it.

You see Susan's mother was the big potato of the family an' brought her girls up to the full an' absolute belief that man's unpardonal sin was disobeyin' his wife. In other words, she seen that none of her son-in-laws were allowed to prance 'round with the word 'boss' attached to the band of their hats. Me an' Susan hadent bin married more'n a week afore she called me up on the carpet an' sez: 'Sam, you've bin loafin' on pap for these many years an' its up to you to dig in an' earn salt for the both of us,' sez she, an' toted me down here to Oilton an' hired me out as a roustabout to an oil company. Billy, I wish to goodness pap had cought and whaled the daylights out'n me that mornin' I run away. An' Billy, Susan is so dadburned jealous I dassent take a squint at a female picture tacked on the front of a show house. Billy, sez he, me and you were raised together back in Cattarragus county, an' I want you to come home with me an' tell Susan what an industrious feller I was an' that you've node me to work forty-eight hours without restin' jist because my pap was kind to me, an' like as not I'de work up to be a pumper or suthin' like if she'd quit her dadburned naggin'. Yes, Billy, I wish pap had cought and laced the fool Injun idea out of my head the mornin' I run off."

The forlorn look on Sam's face led me to accept his invitation, but when I met Susan, whoe's heft was twice that of Sam's, I desided to put off my interview as to her treatment of Sam 'till I arrived at Drumright an' do it over the phone.

It was unanimously decided in Mink City, that Sol Skinner's wife was the lone artist of Posey county at fault findin', but Susan Whipple has her beaten frum head to feet. After supper an' Sam had gone fur water half a mile distant, Susan sez: "Uncle Billy, when I married Sam, he obeyed me for a spell as a husband oughter an' with my pap's help we got along tollable well 'till he got the idea inter his head that he was the head of the shack an' got to treatin' me as if he was my equal, but I soon put the kibosh on his thinker coz I werent goin' to let any bow legged man critter give me lessons on married life. A couple of times this summer already he undertook to skip out an' leave me a grass widder to take care of myself, but I kotched him both times afore he got away. I jist know he's in love with some red headed hussy up at Tulsa. I want to say this that I'll make it mighty interestin' fur any brazen faced woman who takes Sam frum me. Uncle Billy, Sammy used to think a heap of me an' bein' you're his friend I wish you'd help me git his love fur me back. I'm gitten old, Uncle Billy, an' it will be a sight harder fur me to git another man as it was to git him."

I told Susan that I'de write up some persedins fur her to go by that if she'd follow, Sammy would stick to her as close as a red ant to the calf of a driller's leg an' send it to her frum Drumright, fur which she thanked me.

Sammy follered me to the station in the mornin' and when we shook hands he said: "Uncle Bill, I wish pap had cought an' larrupt the dum fool Injun huntin' notion out'n my head the mornin' I run off."

The follerin poetry is a facsimili of what I sent Susan an' hope it will create peace:

Dear Susan you want me to tell you the way,
To manage the man of your choice;
So the dove of contentment will dwell in your home,
And you with your husband rejoice.
Well here I will give you the very best rule,
To keep his love burning and young,
Remember the tale of the beam and the mote,
And keep a tight rein on your tongue.

Don't roast him for every mistake that he makes,
Nor start in to sniffle and weep;
Don't keep your old jaw going all of the time,
A man to be healthy must sleep.
And when he returns each night from the lease,
His mind worn out and depressed;
Just muzzle that talking contraption of yours,
And give the poor devil some rest.

If ever a woman with red golden hair,
Goes by where you live on the street,
Don't swear that your husband is stuck on her shape,
And jump on the man with both feet.
For many a household is broken in twain,
And never united no more—
When some "other woman" is brot in the case,
And the man never saw her before.

Remember that Sammy has cares of his own,
Which fills him with worry and grief;
And keeps him right down with his nose to the stone,
So his moments of pleasure are brief.
If ever you notice him doing his best,
Contentment of mind to possess,
Don't start that bugle-keyed tooter of yours,
And fill his poor soul with distress.

There is many a husband now living in doubt,
In regard to a life after this;
And often he wonders if ever he will
Meet loved ones in realms of bliss.
Just then you start up your old buzzer again,
Which all of his yearnings dispel;
And while he has doubts of a heaven above,
On earth he knows there's a Hell.

Dear Susan, if you will just start in today,
To realize all that you hope;
Commence making Sammy think he is O. K.
And give him your best loving dope.
His face will light up with the glowing of joy,
The gayest of antics he'll cut;
And if you continue to treat him that way,
You will make him a dear loving mutt.

To be continued.

SOCIETY AND OTHER HAPPENINGS.

Squire Hicks called at our office yesterday an' sez fur us to state in

this issue that fur the next ninety days he'll officiate at marriages at $1.00 a pair, with 30% discount fur cash. The squire sez that out of 6 marriages that can be traced to him, there hasent bin but two divorces to his knowledge and belief, an' frum this on them he ties together in wedlock has got to promise afore he does it, they will live together.

Ephe Hammerstein, our bee apeary an' weather prophit sez that we may expect changeable weather most any time frum this on. One thing about Ephe is, in his foreordainin' about the weather, he don't git himself tangled up forecastin'.

Simon Luggs, of Hardrock corners has bought a lot on Back street an' after building a house will move into it. We welcome this new addition to our population, 'though it is said Simon was compelled to leave where he was for various reasons. This notice of his coming here ought to be followed by a subscription to the Walking Beam.

We clip the follerin' frum the Tulsa World, which is published in Oklahoma:

"Uncle Billy Johnson of the Walking Beam, published in Mink City, Ingeaner, stopped at our office on his way throughout the state in the interest of his paper. Before leavin', he recommended that we ship our shop-worn type to Mink City, care of his publication. Mr. Johnson informed us that with a few changes, our plant will compare favorably with his."

We, the Mink City pitchin' club, challenge a like number frum Briarville to pitch a game of horse shoes on our street in front of Cy Jones' grocery Saturday afternoon. Game to commence at 5:30 an' last until one or tother gits licked. Sam Koonce will tally an' will countenance no back talk. Winners to pay for the smokes.—Advertisement.

Widow Blossom received a missive last week from a feller who signed himself William Hurley, Okmulgee, Oklahoma, askin' her to correspond with him with marryin' intentions. She asked us to look up his behavior an' sich like. We writ to him askin' his age, color an' religion, the latter don't matter so much, an' if he was self sustainin'. There's so many fellers goin' 'round in sheep's clothin' a foolin' unsuspectin' females who own a few acres of ground like the widow does, that one has to be on their guard, so to speak.

OIL NOTES.

The Linseed Oil Co. are talkin' of drillin' on the Arbuckle Jones tract, their first location to be on the right hand corner of his calf lot as you go frum here to his place. Some say they will git a dry hole while others don't.

The Cross Roads Co. have decided to clean out their No. 1 on Abe Zimmerman, which has bin leakin' fresh water fur several months. At one time Abe's well was the best in the field, but fell off in production considerable fur lack of oil.

Havin' heard of no accidents in the field there is very little to write about but hope something of an exciting nature will happen for our next issue. Its mighty hard to write articles fur a newspaper when nothing happens to write about.

THE FINDLEY GATES WELL.

HORSE SHOE LUCK.

Although Venango county is now rated among the "has beens" as regards flowing wells, occasionally one is struck to remind operators of the days along Oil Creek when the striking of a gusher was almost a daily occurrence.

The first well drilled in Venango county that flowed was drilled near the mouth of Cherry Run, the present site of Rouseville, the drill penetrating the sand on the afternoon of the 17th of April, 1861. Fifty-four years later, on the afternoon of June 23, Finley S. Gates, operating on the Mary M. Fisher tract which lies two miles south of Oil City and four miles southeast of the Rouse well, completed a third sand well that was estimated at 1,000 barrels a day.

The well being in old territory, caused no little sensation in oil circles and hundreds visited the scene and many handsome offers were made Mr. Gates for locations, but as he had the territory within half a mile of the spouter under lease, in other words had a little oil world of his own with a fence around it, he refused all who sought a slice of the rich territory.

Mr. Gates is a native born Venango county man and has been engaged in the oil business in different lines for the past 31 years. Though at times the road was rough and stony, on the whole he has been successful, the last addition to his production placing him well toward the top of the ladder among the lucky operators of the country.

To a correspondent of this publication, the following story was told by Mr. Gates, in which a horseshoe plays the part of "Lucky Jim."

In Salem, Pa., Mr. Gates' home town, there resided one, M. E. Lewis, a driller by profession, for a number of years following this vocation in Oklahoma. It fell out that while on his way to the drilling well he found a well-worn horseshoe which he fastened to the samson post. Now, whether or not the company's good luck can be attributed to the horseshoe, the well, when finished started off at an 800 barrel gait. Shortly after the completion of the well, Mr. Lewis received a letter from Mr. Gates requesting him to come back to Venango county and work for him. Accepting the offer, Mr. Lewis arrived at Salem to find the machinery in place for the test, the location a mile distant from the village. On his way to the field he found a well worn horseshoe, a counterpart of the one found back in Oklahoma, which he carried with him to the field and hung it on a nail driven into a girt that supported the forge roof.

Contrary to Mr. Gates' expectations, the gray sand struck at a depth of 938 feet had a very light showing of oil. It was then decided to drill to the third sand formation, but it was with but little, if any hope of striking a pay. A small flow of gas followed the breaking of the caprock over the third which did not increase until four feet in the sand when with a rush and roar a volume of oil spurted up, forcing itself forty feet above the mast.

McDONALD.

The Most Prolific White Sand Pool Discovered In Pennsylvania. A Town Lot Excitement Developed Into One of the Noted Fields of the State Holds Its Own In Production. The Deepest Well Drilled With Cable Tools in the World.

By a Staff Correspondent.

McDonald, with a population of six thousand, is located 18 miles west of Pittsburgh and is one of the principal towns on the Panhandle railroad between Steubenville, O., and the Smoky City. The surrounding country is rolling in the extreme and rich in mineral resources, oil, gas, coal and limestone underlying the high hills, the rich bottom lands yielding abundant crops of hay and grain.

The town dates its origin back for more than one hundred years. James McDonald, appointed Indian agent and one of the judges of the Youghiogheny County Court, while Virginia claimed this section of Pennsylvania, was granted a patent for a tract of land, a part of which is the present site of McDonald.

With the completion of the Panhandle railroad, in the year 1865, a station was built and called McDonald, in honor of the first settler. At that time the settlement consisted of a grist mill, blacksmith shop and one dwelling. With the opening up of the immense coal fields of Washington county, McDonald became one of the principal shipping points for coal which eventually led to the building of a town, comprising 2,000 inhabitants, the greater number engaged in mining.

The male inhabitants swung their picks in the colleries adjoining the settlement, the women baked, scrubbed and hung out washings, the boys pitched quoits on the village green, while the merchants doled out Orleans molasses and Kentucky jeans, with no clairvoyant to foretell that the dawn of a new era of prosperity was fast approaching.

With the trend of oil developments from Venango county into Butler and Allegheny counties, new pools were discovered and operators, notwithstanding a decree had gone forth by geologists that the boundary line for petroleum had been staked off, the principal oil companies sent scouts hurrying south and west of Pittsburgh with the hope of unearthing another pot of the amber fluid. The Royal Gas

Company, in the year 1890, secured a block of territory two miles west of McDonald, drilling two wells on the McDonald estate with light showing of oil in the Gordon sand. Believing they were on the right trail they shifted development to the Edward McDonald tract near the borough getting a fair showing of both oil and gas in the Gordon. After standing two months it was drilled to the fifth sand to find it well saturated with the hoped for grease. Treated to a dose of glycerine, three tanks of high grade oil was secured in ten days. The well caved badly and in cleaning out, the tools were lost and the well abandoned.

The next move by the company was to drill two wells, on the Robb and Sauters tracts just south of the borough. The former proved to be a 20 barrel producer, the latter flowing 160 barrels from the fifth sand.

Up to this time no great attention was given the territory by the rank and file, but when the news of the Sauter well reached headquarters, there came an invasion of Washington county by scouts, leasers and operators, all eager to be present at the "borning" of what eventually proved to be the mastodon of its kind.

July 1, 1891, a company composed of J. M. Guffey, John Galey, Edward H. Jennings and Michael Murphy, operating three miles north of McDonald, on the Mathews farm, struck a thirty barrel producer in the Gordon. Two months later it was drilled to the fifth sand, increasing the output to 800 barrels, which rate was kept up for sixty days, when further probing brought the production up to 11,000 barrels. The well produced 400,000 barrels in four months and was christened "Mathews the Great."

C. D. Greenlee and Barney Forst, who sprung into the limelight during the Wildwood excitement in Butler county, dropped off the train at McDonald one morning, leased the James Mevey tract, comprising 250 acres, drove a stake, gave the contract for drilling with instructions to double-quick the test to completion. On the 26th day of September, 1891, the drill penetrated the fifth formation and the oil came up through the casing at the rate of 140 barrels an hour. Further drilling, the following Monday, increased the flow to the grand total of 15,000 barrels in 24 hours.

James Mevey, a big broad shouldered Scotchman, who, by strict attention to farming and stock raising, had amassed considerable wealth, built a twenty room brick dwelling wherein he and his sister resided. In a sense the Mevey home was a veritable fortress against evil doers as every door and window was provided with a burglar alarm. Notwithstanding the owner, in his dealings demanded the last penny, he was honest and fair. With the tapping of the sand that released the pent up oil, one of the spectators seeing Mevey cutting briars that grew in a fence row in an adjoining field, hastened to inform him of the good news, saying: "Mevey, hang your old scythe on the fence and come over to the well. You will never have to work any more for there are thousands of barrels of oil running down the gully over there."

As unconcerned as being called to lunch Mevey replied, "I haven't time to go up there now as I want to finish cutting out this fence row." The royalty derived from the oil brought Mevey many thousands, but it never changed his manner of living his former simple life. Gathered to his fathers, strange faces are now seen around the old brick structure, an imposing landmark of Washington county.

It was a wild Monday in McDonald history. Proper facilities for taking care of the monster spouter had not been prepared. Like water in a mill race, the oil swept down the hill to the creek, while the heavy volume of gas settled down upon the town as a menace for fire. Men rushed through the town warning the people to put out all lights. Not since the days of the sixties did a race for wealth by oil companies and private individuals take place. Bullion, Wildwood and Petrolia were as a family gathering to a county fair in comparison. Fabulous prices were paid for lots on which to erect a derrick and place a boiler. Well kept lawns and gardens were assigned over to hungry operators for whatever price the owners asked. At one time sixty town lot wells were flowing, pumping or drilling. Gusher followed gusher, pumper followed pumper until the McDonald field added 85,000 barrels of oil a day to Pennsylvania stocks. The field gradually expanded until Oakdale, and Nobelstown were next to fall in line with producers of more or less calibre. Among those engaged in the development of the territory were the Fisher Oil Co., William Gukert and John A. Steele, pioneer oil men; J. G. Haymaker, Thomas Leggett, of Pithole fame; Obadiah Haymaker, who opened the Murraysville gas field, later shot dead for defending his property, and scores of other veterans who had followed petroleum's alluring trail from Bradford down.

Scarcely a day passed during the town lot excitement but the two volunteer fire companies were called out, the most spectacular fire in the history of the field being the burning of the Cook well located near where now stands the present railroad depot. The well had been flowing for weeks, a number of tanks having been placed near for storage.

On the night of August 7, 1891, one of the field gaugers had just turned on a tank of oil when there came a flash and in a few moments flames were belching forth from the tank, the fire spreading to another, then to the well, the terrific heat soon burning out the packing around the casing head. In a short time the derrick and all combustible matter within several rods of the well was consumed. In some manner, by the use of wires, the casing head was released and a stream of oil, forced by heavy gas pressure, shot forty feet in the air before igniting, a sight never before witnessed since the burning of the Rouse well on Oil Creek in 1861.

For two weeks this giant petroleum torch lit up the surrounding hills, to be witnessed by thousands. The officials of the Panhandle railroad ran excursion trains from Pittsburgh, Steubenville and other points on the line, so great had become the desire of people residing

at a distance to see the burning well. Many were the devices used in an endeavor to smother the flames. The steam generated from a battery of seven boilers was played on the fire but of no avail. It was finally accomplished by the use of a bell nipple into which had been screwed a short joint of pipe with a throttle, a longer line extending under the railroad to sump. By use of rollers and wire ropes the contrivance was moved until the nipple was directly over the casing when lowered, the oil shooting up through the short joint. It was but the work of a few moments for a man, with a stream of water playing upon him, to close the throttle and the fire was out.

A number of theories have been advanced as to what caused the fire, it being the general belief that it was caused by a spark from a passing locomotive while others claim the gauger, in an unguarded moment, struck a match, it being near the hour of midnight.

The work of developing the territory went steadily on until the Southwest Pennsylvania Pipe Line Co. was taxed to the limit in keeping the tanks from running over, notwithstanding the Mellon Brothers were operating independent pipe lines laid into the field.

If, when the McDonald field was producing its 80,000 barrels a day, it had been said that twenty-six years later the production would exceed 30,000 barrels a month, the one who advanced the idea would have been told to go back to Pithole and sit down. This is the field gauge at the present time, with considerable new work in progress. This being deep territory, there are no pumping powers in use, each well being pumped separately by a gas engine.

With the striking of oil, the town of McDonald underwent a very noticeable change, the one story houses and shacks giving place to brick business blocks and fine residences. Streets were paved and altogether it has become a very desirable residential place.

Companies Operating in the Field.

South Penn Oil Co., Jennings Brothers, Peoples' Gas Co., Big Four Oil Co., O'Day Brothers, R. G. Gillespie, Showalter Oil Co., the Mann Heat & Light Co., Shields Oil Co., Fitzgibbons Oil Co., Sam and Sam Oil Co., the Willow Grove Oil Co., and the Owen Golden Co. The last named have an office in McDonald, with operations in the Evans City, Butler county field. The company is composed of thirteen members. Coincident with this, the thirteenth member is Mrs. J. B. Moulden, who was born on the thirteenth of the month, was married on the thirteenth, and the initial output of the company's first well drilled at Evans City was 13 barrels. Mrs. Moulden is called the mascot of the company.

The Deepest Well in the World Drilled by Cable Tools.

Five miles north of McDonald borough, on the R. A. Geary farm, Robinson township, the deep test well being drilled by the Peoples' Gas Company, of Pittsburgh, Pa., is down 7,181 feet, with the bit slowly cutting its way through a limestone formation.

Work was commenced on November 11, 1911, a careful log of the different formations for both mineral and geological information being kept. At a depth of 1,900 feet a good volume of gas was struck, but below this there has been no strata found carrying either oil or gas, the formation running limestone with an occasional salt vein. The principal object of the company in drilling the deep test was to demonstrate the fact, whether or not, the Clinton sand, claimed by geologists to lie at a depth of approximately 8,000 feet, carries oil or gas. Barring accidents, in all probability, it will be another 12 months before the limit will be reached.

When the decision was reached to drill the test, the building of the rig and placing of machinery was given to C. W. Schwab, formerly of Clarion, Pa., who engaged as his running partner, E. R. Alford, of Turkey City, Pa., with Lee White and J. B. Walters, tool-dressers.

The derrick, with 26 foot base, is 90 feet high and is reinforced at the corners with 5x8 timbers. From the giant bull wheels, controlled by two powerful brakes, to the twin 25 horse power boilers that furnishes steam to drive a big, two balance wheel Ajax engine, no equipment has been overlooked that would endanger the lives of the crew in drilling at this great depth. Recently a new 10,000 foot wire rope, manufactured by the Broderick & Bascom Company, of St. Louis, was wound on the spool, making the sixth used since the well was started almost five years ago.

Up to the present time the well has been cased with the following: 232 feet of 13 inch, 1,960 feet of 8¼, 6,030 feet of 6⅝, with 7,181 feet of 4½ ready to be placed. The placing of the latter will be a tedious job as no collars will be used, the joints being welded when lowered into the hole.

The Peoples' Gas Company have expended a big amount of money in the venture, but if not remunerated by the development of a deep gas sand, they will have the satisfaction of knowing they hold the distinction of having drilled the deepest well in the world.

Mingling with the Fraternity.

In my ramble over the McDonald field the pleasure was mine to meet and converse with a number of the boys, not a few of whom are eligible to be decorated with the "Iron Cross," for long and faithful service—Oklahoma readers please take notice.

In the South Penn Oil Co.'s office we found H. B. Porterfield and E. F. Terrell on duty. Mr. Porterfield hails from Emlenton, Pa., and has been engaged in the oil business from boyhood, his 32 years' experience entitles him to the traveling pass word. For the past 12 years he has held the position of assistant superintendent for the S. P. O. Co.'s interests in the McDonald field.

Mr. Terrell, lease and right of way man for the same company, was born at Pithole, Venango county. His experience in this line covers a period of 25 years. Fairness in dealing with landholders has made him hosts of friends.

F. M. Schell, assistant superintendent, with 20 years' service for

the S. P. O. Co., that covers a term at roustabouting, pumping, tool man and farm boss, which has fitted him for his present position.

Thomas Smith, field foreman for the South Penn, is a native of the Brady's Bend district, and is one of the capable men on the company's pay roll.

E. J. McCarthy, of the S. P. O. aggregation, with a field schooling of 25 years, nine of which were spent in California, was met in travel.

C. L. Karns informed the writer that his business for the company was keeping a monkey wrench in active duty. H. A. Byers, who has been pumping for the S. P. O. Co. for the past 15 years, advanced the information that he dated his affiliation with the oil business with the discovery of the cross belt in Butler county.

Frank Rusk, field foreman for the South Penn, was born in ancient Pithole, where his father followed tank building, afterwards removing with his parents to Parker's Landing. As a matter of early day oil history, his father (John Rusk) fought to a finish the notorious Ben Hogan, at Parker. For the past 23 years Mr. Rusk has held his present position and holds the respect of both the officials and field men.

Oliver Bish has rounded out six busy years with the S. P. O. Co. as a member of the pumper brigade. W. A. Harper, of the Venus crew, S. P. O., is a gas engine manipulator in the field. P. White is a member of the cleaning out squad.

U. G. Boak, who has carried a thief and gauge pole for the past 24 years for the Southwest Penna. Pipe Line Co., is one of the busy men of the hill country.

Philip Peiffer, pumper in the McDonald field for the South Penn for the past 21 years, was born at Venango, Crawford county, Pa., 66 years ago. Mr. Peiffer began work in the oil fields at Bradford, Pa. His fund of information, gathered from observation and experience, is worthy of space in oil history. The South Penn Co. pays his bills.

Then there are a host of other members of the greasy squad entitled to worthy mention, namely: J. L. Harper, J. E. Miller, G. T. Lambing, G. H. Heenan, C. V. Bish, H. L. Syres, W. E. Ayers, H. L. Ayers, L. H. Harper, Homer Lewis, Walter McElhany, address McDonald, care of the S. P. O. Co.

W. S. Davison, with 12 years' experience building rigs for the South Penn, has become proficient with hammer, saw and level.

Thomas Lewis, one of the old guards for the same company, has been on the company's pay roll since 1885. At the present time he is assisting Tommy Smith as field foreman, the two Toms working together in harmony. C. D. McGee, of St. Petersburg, Clarion county, is doing twelve hour shifts in one of the South Penn's gasoline plants, with Thomas Oldfield as running mate.

One of the interesting subjects hailed on the circuit was Elmer L. Davis, a native of Warren county, where he was born 79 years ago. He began working in the oil field when production was confined to Oil Creek valley, his first work being that of hauling oil from the noted Sherman well. Numbered

among his early acquaintances were Colonel Drake, Jonathan Watson, Dr. Brewer, John Benninghoff, Doctor Egbert, James McCray, and many others who figured in the exciting days gone by.

Four years ago while on a visit to Cleveland, he met J. D. Rockefeller, who presented him with a paper vest in honor of his long employment in the service. Mr. Davis has filled the position of pumper for the South Penn Company for the past 22 years and steps mighty lively for one of his years.

S. A. Morehead, of Clarion county, who has worked in all of the Pennsylvania fields, recorded his name with the S. P. O. Co. 25 years ago. James Hancock, with 15 years' oil experience, has chalked up 12 years for the same company. H. J. VanKuren, of Cherry Grove, Warren county fame, is a gas engine starter in the McDonald field. E. D. Kunkle, Clarion county, is on the pumpers' pay roll for the South Penn. William McCarthy migrated from old Ireland 50 years ago, to land in Petroleum Center and has kept pace with the tide of developments; present address, McDonald. H. G. Lambing, who has been affiliated with the South Penn for the past 12 years, pumped the first well drilled at Parker's Landing. Well drilled in 1868, owned by James E. Brown. J. D. McClain, formerly of Butler county, began working in the field 35 years ago. Monthly check signed by the S. P. O. Co.

G. F. McCullough, of Greene county, Pa., 7 years; S. M. Wheeler, 14 years, and C. C. McKenna, 14 years, is time credited by the South Penn to each in the McDonald field. R. E. Boak is a prime factor in the field, his work being that of keeping "Tin Lizzies" in running order for the oil aggregation. R. E. pumps as a side line.

N. Little, of Millerstown, Pa., runs tour on a gasoline plant, as does C. L. Conn, both experienced men in the business. C. A. Fullick, who hit the derrick trail twenty-five years ago, is a McDonald worker; also W. J. Scott, of Monongahela City.

At Nobelstown, W. H. Buchanan is foreman for the gasoline department of the Riverside Oil Company, which position he has held for the past 18 years.

The main shop of the South Penn derrick manufacturing plant is located at Nobelstown, with A. E. Dunkle, of Parker's Landing, general superintendent. Mr. Dunkle also has charge of the Evans City plant. Other Nobelstown incumbents met were F. M. Roach, of Pleasantville, Pa.; G. D. Robinson, a subordinate chief; W. E. Pollock, of Parker's Landing; W. T. Dickson, of Butler county; L. R. Lefley, of Pithole fame, on the retired list, and E. J. Galbraith, of Clarion, Pa., tour man on the South Penn waterworks. Field Foreman B. L. Porterfield, for the company, is a native of Emlenton, Pa. To follow his back trail would lead through the principal fields of Pennsylvania and West Virginia. Floyd Avery holds the position of field foreman with 21 years' of service. N. V. McCann, (alias Signet), birthplace Conneautville, Pa., with twenty years' service in the Ohio fields, tramps gas engines for the S. P. O. Co.

W. E. Speer, one of the younger

generation, whose father was one of the pioneer drillers on Oil Creek, is team boss for the Nobelstown outfit. Harry F. Stauffer is gasoline tour man for the company.

N. H. Lynch, Nobelstown, is with the Jenning's Oil Company. W. J. Beggs is foreman for the Jenning's Company. J. H. Shrum, of Kaneville, Pa., is now with Jenning's Bros. in the Nobelstown district. J. W. Kelly, formerly of Wellsville, Ohio, well known throughout the Butler county fields, has been with the Jenning's Company for the past eight years.

J. J. Connors, of Corry, Pa., runs tour on one of the South Penn's gasoline plants. W. F. Karns is field man for the Jenning's Bros.

J. J. Harty, born at Fryburg, Pa., has charge of a section of the S. P. O. Company's southwest division.

One of the old guards, field foreman for the S. P. O., is A. D. Karns, whose first work in the field was to help roll oil barrels onto boats at Petroleum Center, to be promoted to driving a horse attached to a horse power at a drilling well on Oil Creek. Mr. Karns came to McDonald with the opening up of the field.

J. R. McCullough, of Greene county; A. H. Sheakley, of Butler county, and H. Mitchell are field workers in the McDonald territory.

T. S. Hartman is one of the few individual producers in the field. C. Strankle, of Indiana county, Pa., with 34 years of field work to his credit, runs tour on a gasoline manufacturing plant. Address, McDonald, Pa.

OBITUARY.

Mrs. Alice Corinne Swisher, wife of Paul W. Swisher, of Pittsburgh, died suddenly while at the summer cottage of her brother-in-law, Major John M. Reed, at Rockmere. Mrs. Swisher was apparently in good health up to the time of her death, which was due to heart trouble. She was sitting in a chair talking with her sisters, Mrs. Reed and Miss Amy McConnell, when her head fell back. The sisters went to her but their efforts to revive her failed. Drs. Downes and McLane were summoned from Oil City, but the patient was dead before their arrival.

The deceased, who was the daughter of Mr. and Mrs. Harvey McConnell, deceased, was born in Butler county, Pa., April 23, 1861, going to Oil City with her parents when a child. Besides her husband, who is connected with the Eureka Pipe Line Co., she leaves three daughters, Mrs. A. B. Brown, Misses Mabel and Sarah Swisher, of Pittsburgh; one son, Cree B. Swisher, Lima, Ohio; two brothers, Henry H. McConnell, Warren, Pa.; Charles R. McConnell, Oil City, and four sisters, Mrs. J. M. Reed, Mrs. R. L. Begley, Misses Kit and Mamie McConnell, all of Oil City.

John C. Fisher, aged 75, died at his home in Pittsburgh recently. He was born in old Allegheny, and at the age of 21 years enlisted in Company C, One Hundred and Twenty-third regiment, Pennsylvania Volunteers, and served during the war. He was one of the pioneer oil men of Western Pennsylvania, and was active in the boating of oil on the Allegheny river in the early days, being commodore of a fleet of boats. He was for years a member of the Fisher Oil company and served on the board of directors of the Birmingham Traction company and Chartiers Valley Water company, and was president of the Scientific Materials company at the time of his death. Mr. Fisher retired from active business some time ago, but maintained an office in the Hartje building. He was interested in local and civic matters, and was a member of the chamber of commerce. In 1865 he was married to Mary Weber. He leaves his widow and two daughters, Mrs. George A. Harwood and Miss Amelia C. Fisher, and three sons, John F. Fisher, of Tulsa, Okla., and Chester G. and Edwin H. Fisher, of Pittsburgh.

J. L. Viets died at the Kane Summit hospital on September 2. The funeral services were conducted at the family residence at Kane by Rev. J. F. Black, pastor of the First M. E. church. The interment was in charge of Colonel Charles J. Biddle post, G. A. R.

The deceased was born at Amboy, O., in 1843. When 18 years of age he enlisted in the Eleventh Indiana infantry volunteers and served for three years and three months. He was an active member of the Kane post of the Grand Army of the Republic, and was a loyal supporter of the order.

In his early manhood he was engaged in the oil business in the Butler oil fields for several years. He went to Kane about 25 years ago, where he had since resided. During his residence there he was engaged in the mercantile business for some time. For the past few years he had lived in retirement. He was a member of the First Methodist Episcopal church.

William McFadden, age 38, district superintendent for the Michael Murphy Oil Co., was drowned September 15 in a 250-barrel tank of oil on the Thomas Basinger lease, three miles west of Petersburg, Ind. McFadden, who was on his way to Vincennes to meet Michael Murphy and his son, John, took Guy Frank, a field leaser, with him to test the big oil "gusher" recently drilled in on the Balsinger farm by the Murphy company, before proceeding on his journey.

The men climbed one of the ladders leading to the top of the tank and McFadden had reached the top and was taking the gauge, when he was overcome by gas and started to fall in. Frank seized him and had called for help and was holding him headover the side of the tank when gas fumes overcame him, and he fell to the ground, a distance of 14 feet. He revived, staggered to the home of Basinger and gave the alarm. It took physicians several hours to revive Frank.

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NEW YORK BELTING & PACKING CO.
NEW YORK

Review of Oil Developments.

For the Third Quarter of 1916. Market Quotations, Field Work, Runs, Shipments, Etc.

NOTE--What is printed under this head is not biased in any particular and merely represents honest thought after careful canvas of the opinion of others and a thorough study of the statistical situation. This magazine derives it's support from its subscribers and advertisers and is published in their interest.--Editor.

As foreshadowed in our last report the break in the price of all crude petroleum came as a natural sequence of the development of new pools and a sudden influx of a flood of oil in the Mid-Continent field.

The change in quotations came as follows: July 15, 10 cent cut for Crichton and Caddo, both light and heavy grades. July 24, 10 cent reduction for Kansas and Oklahoma, followed at short intervals by others until 90 cents was reached, since then this price has held firm. July 29, the Joseph Seep Agency announced a change of price from $2.60 to $2.50 on Pennsylvania grade and other eastern oils, this was followed by a similar cut on August 3, and a 5 cent reduction on August 10 and 15, respectively. The market now is in statu quo at $2.30.

On August 13, 1915, the markets for all grades of oil started on their spectacular upward movement culminating in a $2.60 price for Pennsylvania and a proportionate increase for the various grades. These were the highest prices paid for oil since the memorable flurry in the Oil City Exchange which by concerted action on the part of a few brokers succeeded, on April 17, 1895, in establishing for a few minutes an unwarranted price of $2.69. This, incidentally, finished the Exchange as a market maker and ended in its total eclipse a short time afterwards.

The present quotations for all grades of oil together with the price paid at the time of our last issue, July 1, is appended:

	July 1	Sept. 1	Sept. 28
Pennsylvania	$2.60	$2.30	$2.40
Mercer Black	2.10	1.80	1.90
New Castle	2.10	1.80	1.90
Corning	2.10	1.82	1.90
Cabell	2.12	1 82	1.92
North Lima	1.73	1.43	....
South Lima	1.73	1.43	....
Wooster	2.00	1.65	....
Indiana	1 58	1.28	....
Princeton	1.82	1.47	....
Somerset	1.95	1.65	1.75
Ragland	.90	.75	.80
Illinois	1.82	1 47	....
Kan. and Okla.	1.55	.90	....
Plymouth	1.68	1 08	....
Healdton	80	.40	....
Corsicana Light	1.55	.90	....
Corsicana Heavy	.80	.40	....
Electra	1.55	.90	....
Henrietta	1 55	.90	....
Thrall	1.55	.90	....
Strawn	1.55	.90	....
Moran	1.55	.90	....
De Soto	1.45	80	....

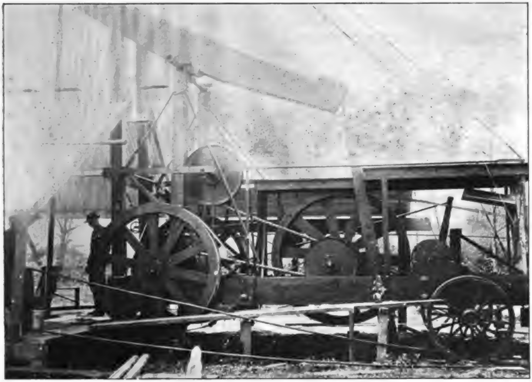
STANDARD STEEL CAR COMPANY

PITTSBURGH, PA.

Crichton	.90	.60	....
Caddo, 38 deg.	1.55	.90	....
Caddo, 35 deg.	1.45	.80	....
Caddo, 32 deg.	1.40	.75	....
Caddo, Crude	.90	.90	....
Canada	2.13	1 83	....

In the Kansas and Oklahoma fields things are in an anomalous state and it is difficult to arrive at a conclusion in the concrete as to the present production and its potentialities. News comes that the big company has let it be known that it will connect and accept 50 per cent of the new wells. What effect this will have on the output can only be conjectured as no one can safely make a guess as to the calibre of the wells on top of sand and nearing completion. It will require several weeks to get a clear idea of the extent of the new production that this order will have. The embargo placed on the runs have had a salutary effect which is shown by the large reduction in completed wells (278) and a heavy decline in new production, many of this number, however, may be held on top of sand and the new probable production of these wells can only be guessed at. One of the most disturbing features in the two states has been and is the lack of water, the drouth now in progress has not been so bad in years. The writer of this has interviewed several oil men in the past sixty days who are conversant with Mid-Continent operations and there is a wide variance in their statements as to the probable production of the field if the gates were let down. Estimates, anywhere from 800,000 barrels to 500,000 barrels were made. The main fact that stares the producer in the face is the lack of pipe line and storage facilities to care for such a great quantity of oil, this will no doubt be regulated in time, in the meantime the demand for the oil increases with each day. If the war should continue for another year and the great exports thereby kept up higher prices will naturally follow. In Russia they have only a limited supply of oil for their own use and the work of drilling new wells (reported by drillers returning to this country) has almost entirely been suspended. The Galician field has been so overrun by contending armies that it has been practically ruined. In Roumania, which has a yearly production of 15,000,000 barrels, work has been stopped by the entrance of that country into the war game. In other remote foreign fields work is at a standstill due to the lack of material and supplies occasioned by the European strife. Recently there arrived at San Francisco 88 oil field workers from Burmah, India. These men were compelled to leave by the high cost of living that confronted them in that far away country as the most of them had families to be provided for in this country.

The growth of the United States foreign oil trade has been wonderful. In 1900 the valuation was only $75,000,000, June 30, 1916, the end of the fiscal year it reached $166,000,000. This was an increase of $33,000,000 over 1915, and is evidence that the war is helping the oil business. This was the greatest foreign trade in oil ever recorded. The statement shows while the illuminating exports fell off largely to England—indicating the people were not partial to light just now—



It is thoroughly practical, very simple and easy to operate.

It is light and easily moved—one team can move it from one location to another under ordinary circumstances.

The Derrick rests on the machine, between the bull wheels, this giving the derrick its full strength and the machine rigidity.

The Derrick is in two sections—one folding into the other in raising or lowering—thus making it easily raised, not requiring a "gin pole" to raise it.

There is no so-called stiff connection, as there is neither chain, nor cog gear nor a belt so large and tight as to make a stiff connection.

There being no engine on the machine you are not limited to the use of any particular kind or make, but can use a steam, gas or gasoline engine.

The bull wheels are run by means of a loose belt, kept tight by a loose pulley, and remain stationary while drilling or spudding.

Its construction is such that the machine stands rigid when working and does not need to be tied or weighted down.

All work is controlled at one point.

It is a straight line machine and gives the same action on tools that is obtained on a standard rig.

It has drilled four 800-foot wells including moving, shooting, pumping off, etc., in 24 days.

It has drilled 32 wells, average depth of over 1000 feet for each of them, in a little over 13 months.

It has stood under the strain of fishing; using solid pipe connection to the tools, 1-inch wire line over the spudding arrangement and swinging over **4 TONS OF SOLID METAL TO JAR WITH.** It took a month of jarring but they got the tools.

It also stands under the strain of seven 1-inch wire lines in the derrick when pulling heavy strings of casing and packers.

IT WILL DO THE WORK AS THE WORK OUGHT TO BE DONE.

VENANGO PORTABLE DRILLING MACHINE

MANUFACTURED BY

LINDEN W. WOLFE, Oil City, Pa.

yet the loss was more than made up by the great volume of lubricating oil sent to those countries. The gasoline exports also showed a falling off of nearly one-half compared with the last fiscal year. There may be two reasons assigned for this—one economy, the other failure of shipping facilities.

Reports from the Kansas and Oklahoma fields show that the energetic wildcatter is not meeting with the success that has rewarded him in the past, the advanced wells are neither finding oil or the strata in which it should be deposited.

The Cushing and Shamrock pools are still the banner producers and it is not likely anything will be opened up to take their laurels from them. The former will undoubtedly have the record for all time as the most prolific pool ever discovered in this country. BUT—we remember very distinctly when it was freely predicted way back in the 80's that there would never be another oil field to compare with that of Bradford, Pa., the wiseacres said in substance, "geographically there was no such extent of land remaining untested where oil would be found so extensively, that geologically the limit is narrow where the sand-rock storehouse dips at a nearly uniform angle to the southwest, it soon becomes too deep in one direction ,and rises too near the surface in the other" so that we can have no reasonable expectation that any new and extensive field will be found which will measure up in area or in the amount of oil to be obtained to that of the great Pennsylvania pools that now seem to be drawing near to exhaustion." This prophecy, like many others coming from the geologist and oil prophets, has been placed among the rubbish, therefore, we do not care to give a bond that the great Cushing field will never be eclipsed in its maximum production; there may be greater pools yet undiscovered that were never dreamed of in the oil man's philosophy. As some one has said, "Nature doesn't do business in the retail way." It is pretty well established, however, that petroleum is not now being produced in the sand-rock by distillation and when once the reservoirs are exhausted there will be an end of it.

A summary of the monthly report of the field work for August taken from the Oil City Derrick is herewith submitted along with that for July, that the two may be compared:

For August.

	Comp.	Prod.	Dry	Gas
New York	23	45	2	..
Pennsylvania	281	589	29	25
West Virginia	169	1,060	23	47
Southeastern Ohio	131	1,041	40	4
Central Ohio	46	25	11	33
Northwestern Ohio	78	947	6	..
Indiana	21	217	7	..
Ky. and Tenn.	122	3,659	28	..
Illinois	156	2,957	32	..
Kansas	310	30,929	45	9
Oklahoma	650	35,969	92	30
Louisiana and Tex.	183	19,924	65	8
	2,170	97,462	380	156

For July.

	Comp.	Prod.	Dry	Gas
New York	25	41	2	..
Pennsylvania	316	738	26	21
West Virginia	162	1,965	28	36
Southeastern Ohio	145	806	41	7
Central Ohio	30	90	10	26
Northwestern Ohio	71	944	8	..
Indiana	26	282	10	..
Ky. and Tenn.	120	3,678	16	..
Illinois	142	2,647	26	..
Kansas	434	28,626	16	10
Oklahoma	759	59,099	77	18
Louisana and Tex.	207	34,021	66	8
	2,437	132,937	326	126

These reports show a big decline in new production and an increase in dry holes. Kansas is the only state that shows an increase of output with 124 less wells completed. This was due to several gushers being brought in at the close of August. The news from the fields for September indicate a large decline in new work with many dry holes.

The work in the Pennsylvania grade fields has dropped off and the results have been negligible. This, too, in the face of a fine market price that did not break until August 15, and is still $2.30. The only solution to this state of affairs is the want of territory to drill on with a fair chance of getting a paying well. In West Virginia there is more activity than in any other high grade field. In the neighborhood of Mannington there is considerable work under way. Down in Greene county, Pa., there are quite a number of strings of tools in operation with fair results.

Looking at it from every standpoint there is bound to be, in the near future, a shortage of Pennsylvania grade oil and where there is a greater demand than the supply past precedents would indicate an advance in this particular grade of oil, at least.

In Kentucky there is extensive leasing going on and many thousands of acres are being tied up for future work. The recent results have been very encouraging. The history of the work in Kentucky in the past is against it. It had an oil excitement in 1865 when wells of 300 or 400 barrels were struck, but they soon petered out. During the intervening years there have frequently been boomlets but never succeeded in holding their place on the stage very long. The present excitement appears more substantial than its predecessors but you never can tell and only time will tell the story.

The California market was mark-up 5 and 6 cents on September 20, according to grade. The statistics from the western coast show an enormous consumption that the new production is not keeping pace with. The reduction of 10,000,000 barrels in the stocks during the past year, would if the same conditions continue, wipe out the entire surplus oil in five years. American war ships alone are using vast quantities of the fuel oil and the resumption of the general carrying trade by vessels by a cessation of hostilities in Europe would doubtless increase the consumption greatly.

Runs and Shipments.

(Eastern Pipe Lines.)

The runs and shipments for August are placed beside those of July so that comparisons may be made and conclusions drawn by the reader:

Companies	Runs	Shipments
National Transit Co.	225,360	507,656
Southwest Pa. P. L. Co...	113,218	182,858
Eureka P. L. Co.....	678,532	82,702
Buckeye P. L. Co., (Macksburg Div.)	297,725	2,425
Buckeye P. L. Co., (Lima Div.)	180,702	359,722
Indiana P. L. Co.....	25,101	938,654
Cumberland P. L. Co.....	125,799	1,235
Southern P. L. Co.....	.....	268,308
Crescent P. L. Co	.....	94,897
New York Transit Co....	15,430	782,886
Tidewater P. L. Co.....	115,629	168,891
Prod. & Ref. Oil Co.....	170,927	246,571
Emery P. L. Co.....	29,429	32,378
Totals	1,977,852	3,687,183

The receipts other than regular shipments were 12,268,128, making

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"646 and the Trouble Man"

BY CHARLES H. OLIVER

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All in all the story is a splendid piece of fiction, and will be welcomed particularly by the people of the oil country. It is well written and full of interest from start to finish.—The Pittsburgh Press.

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The story is an excellent piece of writing, and will be welcomed by readers, young and old. It is a stirring romance of a splendid young fellow just out of college and a charming young woman. It would not do to tell all about their love affairs here, but we reveal no secret when we say that Jack Somers was some hustler and well deserved all the good fortune which fell to his lot.—Baltimore American.

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OIL AND GAS MAN'S MAGAZINE, Butler, Pa.

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the total receipts 14,245,980 barrels. The deliveries other than regular shipments were 10,488,572 barrels, making the total receipts 14,175,655 barrels. For comparison with the foregoing the summaries for July are reproduced as follows:

Companies	Runs	Shipments
National Transit Co.	221,004	487,592
Southwest Pa. P. L. Co...	103,183	164,937
Eureka P. L. Co	631,024	91,059
Buckeye P. L. Co., (Macksburg Div.)	285,042	748
Buckeye P. L. Co., (Lima Div.)	176,591	224,400
Indiana P. L. Co	24,541	1,042,102
Cumberland P. L. Co.....	85,973	3,469
Southern P. L. Co.....	.....	310,843
Crescent P. L. Co.....	.....	202,984
New York Transit Co ...	14,987	878,902
Tidewater P. L. Co.....	113,142	176,349
Prod. & Ref. Oil Co.....	165,182	183,313
Emery P. L. Co.....	29,251	37,270
Totals	1,844,920	3,803,996

Summaries of the Illinois business of the Illinois Pipe Line company for August are given as follows: Runs from wells, 1,129,328 barrels; other receipts, 1,079,646 barrels; total receipts, 2,208,974 barrels. Regular deliveries, 177,025 barrels; other deliveries, 2,109,030 barrels; total deliveries, 2,286,055 barrels. Gross stocks at the close of August, 2,109,003 barrels, as compared with 2,708,600 barrels at the close of July.

Oklahoma-Kansas Statistics.

Pipe Line Runs.

	August	Daily av.
Prairie P. L. Co. (est.) ..	2,431,950	78,450
Gulf P. L. Co	992,000	32,000
The Texas Co.....	366,402	12,142
The Magnolia P. L. Co...	47,817	15,413
Outside lines (est)	3,875,000	125,000
Total August	8,153,169	263,005
Total July	8,075,045	260,472
Increase	78,124	2,533

Shipments.

	August	Daily av.
Prairie P. L. Co.....	3,689,128	119,004
Gulf P. L. Co.....	883,500	28,500
The Texas Co.....	443,581	14,309
The Magnolia Pet. Co ...	477,817	13,774
Outside lines (est)	3,735,500	120,500
Total August	9,178,709	296,087
Total July	9,305,892	300,189
Difference	127,183	4,102

Stocks.

Prairie Oil & Gas Co. (est.)	40,200,000
Prairie P. L. Co. (est.)	1,000,000
Carter Oil Co.....	20,295,000
Gulf P. L. Co.....	5,336,500
The Texas Co.....	8,475,620
Magnolia Pet. Co.....	4,600,850
Outside lines (est.)	4,087,500
Total August	83,995,470
Total July	84,243,993
Increase	248,523

Note—Stock figures do not include approximately 7,500,000 barrels held in storage on private tank farms and leases.—Oil City Derrick.

Reports from the oil fields of Mexico indicate that business is being resumed there and no doubt the month of September will show a large increase in production and improvement in shipments. It is estimated that the Penn-Mex shipments will amount to approximately 800,000 barrels during the present month.

The Sinclair Oil and Refining Company has announced that it is surveying a route for a new line to be constructed with 8 and 12 inch pipe from Cushing to Fort Madison, Iowa, and Chicago, Ill. The line will be 800 miles long and will require over a year in building. Refineries at both terminals will be built to care for 40,000 barrels per day. The Sinclair is a big independent concern and has been cutting a wide swath lately in the Mid-Continent district.

Mid-Continent Fields.

The following table shows the runs, shipments, and stocks of the Prairie Oil & Gas Co., and the Prairie Pipe Line Co. for the Mid-Continent field for the year:

1915.	Runs	Shipments	Stocks
May	2,790,000	3,941,639	32,000,000
June	2,100,000	3,576,520	41,500,000
July	2,790,000	3,568,185	42,000,000
August ...	2,945,000	3,790,903	44,000,000
Sept.	2,700,000	3,821,049	45,000,000
October ...	2,225,000	3,870,362	45,000,000
Nov.	2,550,000	3,763,745	44,000,000
Dec.	2,790,000	3,727,092	41,000,000
1916			
Jan.	2,945,000	3,818,266	43,000,000
Feb.	2,755,000	3,265,362	42,000,000
March	2,976,000	3,382,694	41,250,000
April	2,976,500	3,422,450	41,300,000
May	3,100,000	3,503,737	41,100,000
June	3,150,000	3,571,545	42,200,000

Mr. H. G. James, secretary of the Independent Refiners' Association, recently published in the Oil City Derrick a very exhaustive and comprehensive article on the "Refining Industry of the United States." This, no doubt, required time and perseverance and Mr. James deserves great credit for giving the public an idea of the immensity of the refining business of this country. We submit here the number of refineries by states as contained in his report:

Petroleum Refineries in the United States.

	No. of Refgs.	Est. Bbls. C'de	Est. Inv.
*California	76	211,300	$ 81,000,000
Utah	1	500	35,000
Colorado	3	5,000	825,000
Wyoming	4	34,000	18,561,000
New Mexico ...	1	150	15,000
**Kansas	21	34,250	8,252,000
Oklahoma	41	†105,075	17,500,600
Missouri	3	13,000	3,136,000
Texas	23	179,800	47,350,000
Louisiana	16	42,150	7,750,000
Illinois	11	39,650	8,600,000
Indiana	1	60,000	25,400,000
Ohio	10	30,900	6,600,000
Pennsylvania ..	56	109,470	40,000,000
New York	11	42,000	50,000,000
New Jersey ...	10	111,000	105,600,000
West Virginia..	6	4,500	2,250,000
Maryland	5	20,500	5,250,000
‡Kentucky	2	.....	.....
Tennessee	1	.....	.....
Total	302	1,043,245	$428,124,600

Idle, 26; building, 11; total active, 265.

*19 plants not operating.

**If present plans materialize, Kansas' refining capacity will be increased 5 per cent during the next year.

Of the 1,043,245 barrels a day capacity, approximately 500,000 is owned by the Standard Oil Company.

Total daily rfinery capacity, 1,043,245 barrels; daily crude production, 1915, 834,000 barrels.

†When the Carter Oil Co., Roxana Petroleum Co., Tiger Refining Co., and Oilton Refining Co. complete their plants Oklahoma refineries will be using 145,000 barrels of oil a day. A number of established plants are materially increasing their capacity.

‡One building; other not operating.

Refinery Facts.

There are 302 refineries in the United States.

Total capacity of refineries is in excess of 1,000,000 barrels a day.

Total daily crude production in 1915 was 834,000 barrels a day.

If it were attempted to operate all these refineries at full capacity, there would not be enough crude to keep them going.

Of the 1,000,000 barrels capacity, the Standard Oil Company is credited with 495,000 barrels. It is building additional refineries.

In this list of 302 refineries 11 are in course of construction and 26 are idle, leaving 265 in active operation. An additional list shows 40 new refineries building or projected. They will bring the refinery capacity of the United States up to 1,193,245 barrels a day or more.

Other refineries are talked of and some will probably be built during the coming year in addition to those listed.

The total investment in oil refineries in the United States is estimated to exceed $428,000,000.

To this might properly be added the amount invested in pipe lines, which would probably aggregate over $200,000,000, making a grand total of $628,000,000.

It is estimated pipe line systems in and from the Mid-Continent field aggregate approximately $100,000,000 gross valuation.

Casinghead gasoline is not taken into consideration in these figures. But it does affect materially refinery output.

No oil is produced in the State of New Jersey, but more money is invested in refineries there than in any other State.

There are 57 active refineries in California and 19 idle plans, making a total of 76.

It is not claimed these figures are absolutely accurate. They are as nearly accurate as it has been possible to ascertain. Letters were sent to every refinery in the United States asking for information, and the list has been checked over many times. A few refiners refused to give information and some did not reply, accounting for the blank spaces.

In some states, as in Oklahoma, Kansas, Missouri and Texas, these figures represent the actual amount of crude used daily by the refineries. In some of the other states the figures represent the charging capacity of the refinery.

It costs 11 cents a barrel to pump crude oil from Oklahoma to Chicago, a distance of 700 miles, and 16 cents a barrel to pump crude oil from Oklahoma to the Gulf, a distance of 500 miles.

Refineries Building or Projected.

Northwestern Oil & Rfg. Co., Salt Creek, Wyoming. Capacity 500 barrels.

Wyo. Prod. & Rfg. Co., Wyoming.

Wyatt Oil & Rfg. Co., Douglas, Wyoming.

Midwest Rfg. Co., Grass Valley, Wyoming.

Cont. Oil Co., Greybull, Wyo.

Milliken & Co., Arkansas City, Kansas. Capacity 10,000 barrels.

J. B. Foster, El Dorado, Kansas. Capacity 4,000 barrels.

Craig, Kaufman et al, El Dorado, Kansas. Capacity 2,000 barrels.

Empire O. & G. Co., Wichita, Kansas. Capacity 10,000 barrels.

Uncle Sam Oil Co., Kansas City, Kansas.

Planet Oil Co., Blackwell, Okla. Capacity 1,000 barrels.

Marion Rfg. Co., Claremore, Okla.

Home Oil Rfg. Co., Yale, Okla. Capacity 500 barrels.

Roxana Pet. Co., Cushing, Okla. Capacity 10,000 barrels.

Carter Oil Co., Norfolk, Okla. Capacity 25,000 barrels.

Oilton Rfg. Co., Oilton, Okla. Capacity 300 barrels.

Tiger Rfg. Co., Okmulgee, Okla. Capacity 1,000 barrels.

Mid-Continent Gasoline Co., Tulsa, Okla. Capacity 3,000 barrels.

Duluth Rfg. Co., Sapulpa, Okla.

Crosbie & Gillespie, Tulsa, Okla.

Shreveport & Mexican Fuel Oil Co., Saxonholm, Louisiana.

Federal Oil & Rfg. Co., Alexandria, La. Capacity 1,000 barrels.

Corona Oil Co., New Orleans, La. Capacity 10,000 barrels.

Developers Oil & Rfg. Co., Shreveport, La. Capacity 2,500 barrels.

Consol. Oil Rfg. Co., Shreveport, La. Capacity 2,500 barrels.

American Oil Refinery, Inc., Shreveport, La. Capacity 150 barrels.

New Orleans Rfg. Co., New Orleans, La.

United Oil & Rfg. Co., Beaumont, Texas.

Petroleum Rfg. Co., Houston, Texas.

The following quotations for Standard Oil subsidiaries showing what was bid on July 1 and now bid October 2 is herewith appended. The great advance in the price of many of these stocks indicate the oil business is in pretty good shape and the coming year will undoubtedly be the most prosperous ever known—war or no war.

Standard Oil Subsidiaries.

Stocks—	Bid July 1	Bid Oct. 2
Anglo-American	15½	16½
Atlantic Refining	688	840
Borne-Scrymser	340	415
Buckeye P. L.	85	105
Chesebrough Mfg.	300	460
Colonial Oil	70	60
Continental Oil	315	540
Crescent P. L.	41	44
Cumberland P. L.	80	92
Eureka P. L.	200	230
Galena-Signal Oil, com.	152	165
Galena-Signal Oil, pfd.	138	138
Illinois P. L.	159	210
Indiana P. L.	87	102
National Transit	15	16¼
New York Transit	183	205
Northern P. L.	93	103
Ohio Oil	225	302
Prairie P. L.	218	295
Prairie O. & G.	400	461
Solar Refining	270	380
Southern P. L.	188	215
South Penn Oil	345	380
Southwest Pa. P. L.	103	115
S. O. of California	248	342
S. O. of Indiana	545	795
S. O. of Kansas	440	530
S. O. of Kentucky	400	560
S. O. of Nebraska	340	515
S. O. of New Jersey	521	598
S. O. of New York	206	235
S. O. of Ohio	620	425
Swan & Finch	95	110
Union Tank Line	81	90
Vacuum Oil	252	295
Washington Oil	30	45

Since the main part of this article was placed in the hands of the printer the Eastern oil producers have been gladdened with a 10 cent advance. The price now for Pennsylvania Grade is $2.40.

OIL BARGE TOWED AROUND THE WORLD

Remarkable Achievement of S. O. Co. Tanker Richmond.

The Standard Oil Company of California announces:

The arrival of the Standard Oil Company (California) steamer Richmond and barge S. O. Co. No. 95 in San Francisco on June 30th, 1916, marks the completion of new history in ocean towing; also establishing a new record for this branch of our American Merchant Marine.

The s. s. Richmond and barge S. O. Co. No. 95, with a combined deadweight capacity of 15,000 tons, sailed from San Francisco, oil laden, on February 20, 1915, on a voyage to New York via the Panama Canal. They were next chartered to the Anglo-American Oil Company for two trips across the Atlantic, and this charter was extended until seven trips in all were made from New York to London. At the termination of this charter, the tonnage situation was so acute on the Pacific Coast that the company had to order these vessels back again via the Cape of Good Hope (the Panama Canal being closed to shipping) and made a charter with the Standard Oil Company of New York for a cargo of oil from New York to Shanghai, China, vessels crossing the Pacific in ballast to San Francisco. The tow was completed without mishap and the Richmond and barge S. O. Co. No. 95 are now back in their Pacific coastwise work.

In 496 days, or the time these vessels were absent from their home port, the Richmond has towed barge S. O. Co. No. 95 for 75,000 miles, crossing the Atlantic and war zone fourteen times, and on arrival had nothing to do but clean boilers and open up the main machinery for examination.

THE AMERICAN MINING CONGRESS.

The nineteenth annual session of the American Mining Congress, which will be held at the Hotel LaSalle, Chicago, during the week of November 13, will eclipse in attendance and interest all previous meetings, and represents a climax of the great work of co-operative purpose and endeavor of nearly two decades.

The seventeenth floor of the Hotel LaSalle has been set apart for exhibits and many of the big companies have contracted for floor space, insuring a great display of everything that comes under the head of minerals.

The oil and gas business will come in for a large share of attention, a section having been set aside for their exclusive use. On Tuesday, Ralph Arnold, of New York City, will preside. Three addresses will be made, "The Oil Resources of the United States," by W. A. Williams, of the United States Bureau of Mines;" "The Authority of States to Tax Production from Indian Lands," by Judge J. G. Gamble, of Des Moines, Ia., and "The Public Interest in Gas and Oil." On Wednesday, Mr. E. L. Doheny, of Los Angeles, will preside. "The World's Oil Supply" will be discussed by Ralph Arnold, of New York, followed by Dr. Rittman on "Chemistry in its Relation to the Oil Industry," and Mr. J. C. McDowell will have an address on "Geology in its Relation to the Oil Business." On Thursday, S. Y. Ramage, of Oil City, will preside. Addresses are to be on "The California Plan of Marketing Oils," by George Labe, of Los Angeles, and "A Federal Petroleum Bureau," by H. G. James, secretary of the Independent Oil Refiners' Association.

Those attending this convention will get into touch with the live wires in their own branch of the mining or oil business, and with new and carefully tried-out economies and means of greater productions. Oil men should try and make Chicago for this great convention as it will be instructive and interesting.

"DRAKE DAY" OBSERVED AT BRADFORD, PA.

The celebration of the striking of oil in the first well drilled successfully by the artesian process was observed at Bradford on Saturday, August 26, as the twenty-seventh, the actual date, fell on Sunday. The event brought quite a number of old timers together but the gathering was not what it should have been. Charles H. Drake, of Philadelphia, the only surviving son of Colonel Drake, was present as the chief guest. Samuel Smith, of Titusville, son of the famous "Uncle Billy" Smith, who made the tools and who drilled the well that gave to the world the wonderful business that is paramount to all others, was also present and received marked attention. It is to be hoped that more interest will be taken in the observance of the natal day of the petroleum business in the future.

"Spotty" McBride will show the visitors something good next year when they meet in Butler, Pa.

AMERICA'S FIRST PNEUMATIC TIRE FOR MOTOR CARS.

The first American made pneumatic tires for motor cars were manufactured in the summer of 1896—20 years ago—at the expense of the Winton Company. For the front wheels 34x4s were used, and for the back wheels 36x4s. Needless to say, these tires were of the single-tube type.

When Alexander Winton was completing his first experimental car, he concluded that neither steel tires nor solid rubber tires would do. Bicycles were equipped with pneumatics, and he knew the merit of riding on air. However, it was not so easy for the pioneer inventor to get what he wanted, because the biggest thing in pneumatics then available was the 1½ inch tube made for bicycles.

The need of a bigger tire was presented by Mr. Winton to Arthur J. Wills, of the B. F. Goodrich Company, of Akron. Mr. Wills listened to the recital, and then took the subject up with B. F. Work, then superintendent of the Goodrich Company, and now its president.

"Well," declared Mr. Work, "it's an experiment. There is no demand for this sort of tire, and we don't know whether the horseless carriage will ever become a commercial success. Tell Winton that if he will pay for the molds, we'll see what we can do."

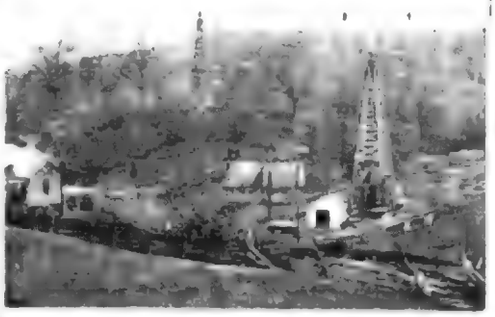
So Mr. Wills returned to Cleveland with the news that the Goodrich Company would undertake the experiment if the Winton Company would pay $75, or $100, or whatever amount in that neighborhood the molds might cost.

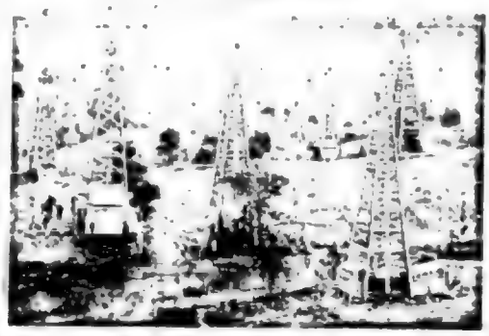
Mr. Winton at once placed the order, and the Goodrich Company made good on its promise. By October, 1896, Mr. Winton's pneumatic clad "jauggernaut" was running on the streets of Cleveland, and the crowds that everywhere gathered about the strange machine never failed to take gleeful note of the enormous tires.

And that was the beginning of the tremendous automobile tire industry on the western continent.

Incidentally, the man who put those first penumatics on the first Winton is still with the Winton Company, foreman of the tire department. His name is John Harriott.

Petroleum Centre, excepting Pit Hole, considered the "toughest" town on the "Creek" in 1864 and which has survived its prototype in wickedness over half a century, has given notice that it is still alive and pursuing the even tenor of its way. Last year a few of the older residents got together and organized a "Home Coming Society." It held the initial reunion last year and followed it up this year on August 31 with a representative gathering held in "Mountain Park" which during the gay days was known as "Hogback Grove." The reunion will be repeated each year on the fourth Thursday of July.





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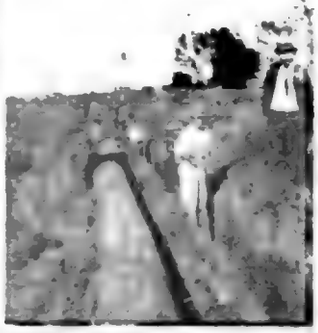

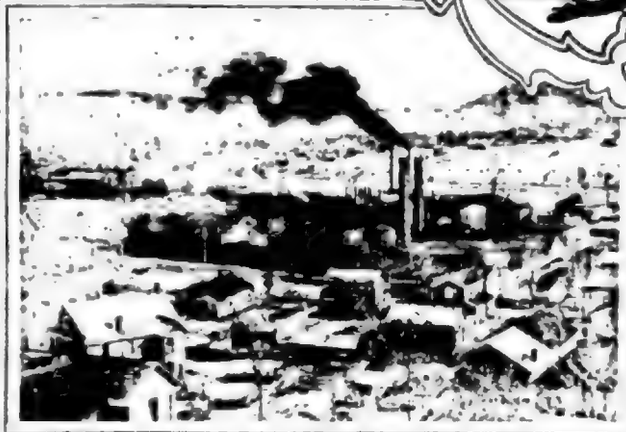

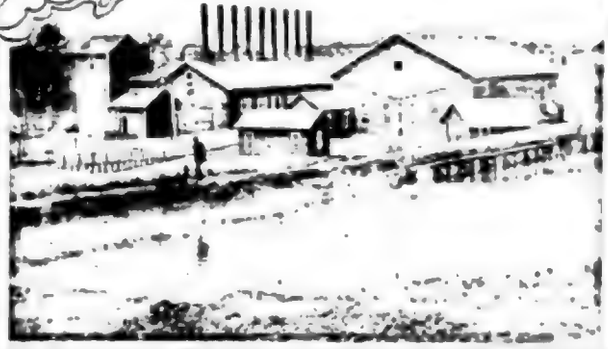

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C. R. WATTSON, Secretary and Treasurer
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CONTENTS

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LOOKING BACKWARD.

First Utilization of Natural Gas and Slow Perception of Its Greatness. The Value of Nature's Gift Was Not Thoroughly Understood Until the Middle 80's When the Craze Spread Like a House A-Fire. Random Notes.

By C. R. Wattson.

THE mechanical inventions produced by the work of the modern genius, giving to the people comforts and conveniences never dreamed of by their forbears and the wonderful material progress of the world, it is no rash assertion to state—was made possible when Col. Drake, at Titusville, on that memorable August 27, 1859, tapped nature's laboratories that gave to mankind the mineral fluid which has proven such a marvel in the development of the arts and sciences of our times. It is true that the progress made with oil and gas in the experimental stages was necessarily slow but it was sure, and we have seen in the last few years achievements that are history making—the reading of which seem like leaves from the pages of fiction.

We of this generation behold the fountain of civilization rising higher and higher and in the light of the present day we see the crowning glory of human endeavor, insomuch, that we are well nigh struck dumb with amazement.

The mighty iron horse, fed with fuel oil, rolls across the continent with the speed of the wind, drawing after it palatial cars equipped with all the luxuries of an elegant home; the earth has been girded with iron bands; the mighty steamboats plow fearlessly through the billows of the deep, the description of the "Imperator" and the "Lafayette" (the latest inspiration of genius) is beyond the imagination of the ordinary mind to grasp the picture as presented in cold type; man has reached up into the heavens and snatched down the electric current and in the twinkling of an eye it carries his thoughts across a great continent or under a vast ocean; Hello Frisco! Hello New York! is no longer a mere song but an actuality, as practically illustrated during the momentous days following the late election when the result of who was to be the next president of the United States hinged on the vote of the state of California and the chairmen of the Democratic and Republican parties were in constant communication, from New York,

with their respective state chairmen at San Francisco by telephone; the floating fortresses, the dreadnaught of the sea, skims the ocean wave more formidable than the terrible leviathan celebrated in the fable of antiquity; the gasoline consumers, the automobile, costing from $360 to $10,000 per—with 3,000,000 now in use in this country and millions more being manufactured have revolutionized the mode of travel; and then the submarine vessel, the English language does not contain adjectives stong enough in expression to fully describe the wonderful achievement of the little German, Captain Koenig, with the "Deutschland." His name will live in history as the first man to accomplish this astonishing exploit. A great war's necessity, through the daring spirit of its men, has brought both the submarine and the aeroplane up to their present perfection and availability.

When you come to look back through the corridors of time and note these marvelous creations through the genius of man we are constrained to again point to the figure of Colonel Drake and his little oil well blazoned on the horizon of civilization, sending out rays that have not only lighted the world but enlightened it. For every American industry today is dependent in a great or less measure on petroleum or its ally—natural gas; indeed can you imagine modern life without crude oil and its by-products.

Since the days of Drake man has been extraordinarily busy delving deep down into the bowels of the earth and bringing up such rich treasures that stories told in the Arabian Nights do not appear to the older generation so fabulous as in the days of their youth. Jules Verne's stories if published now would fail for want of readers, as many of his descriptive imaginations have really become common every day occurrences as chronicled in the daily newspapers.

In "Looking Backward" over the oily trail that those of us, who are still left, have traveled, and, as one contemplates the gradual evolution of the oil and gas business one would need a large book indeed to tell the story in all its details. We are therefore compelled for want of space to merely skim here and there leaving better, probably, than we take.

In our last article we devoted all the space permitted us to petroleum. In this article natural gas will come in for the main attention, reciting the story briefly of its evolution, its present utility and commercial value and great potentiality for the future.

Before the introduction of natural gas and electricity, illuminating gas was used largely in the lighting of cities and residences of the well-to-do (as the price made it prohibitive for the wage earner), so extremely was it employed for this purpose that it was regarded as an indispensible element at the time.

The invention of this illuminant was the conspicuous achievement of William Murdoch, the great Scotch inventor. He had already improved the Watt steam engine and had constructed a model high pressure engine to run on wheels, the precursor

of the modern locomotive; he was also inventor of the oscillating engine. In 1792 he first lighted his office and cottage at Redruth in a trial experiment with coal gas, but it was not until 1798 that he constructed his first extensive apparatus at Birmingham, England, for the making, storing and purifying of gas, with a view to the supply of factories. Not long after this the offices at Soho were lighted with gas and the new illuminant was brought prominently before public notice, in 1802, when the exterior of the factory was lighted in celebration of the Peace of Amiens.

Another great Scotchman and chemist, James Young, antedated Drake's great feat by a few years, when he discovered a method of distilling oil from shale which established the mineral oil industry in Scotland and doubtless, in a sense, led the way to the development of the petroleum industry in this country and elsewhere by the education of the public in the use of "coal oil" in the fulfillment of a seeming plan of evolution of the grand industrial expansion and domestic comforts that are now ours.

This carburetted hydrogen in its day was considered par-excellence as a general illuminant. Compared with the sperm candle and the tallow dip so it was, but with the coming of electricity and natural gas—manufactured gas went into inocuous desuetude, as Grover Cleveland used to remark. Is there any one so bold as to prophesy that the future will provide a light which will supersede the one that has given to the main thoroughfares of our large cities the expressive title of "The Great White Way?"

Natural gas like petroleum (under different names) has been known for ages. When you delve into history for knowledge, old China rises up before you, as a shining light, to give you what you seek and so we turn the leaves of the history of that wonderful country and learn that natural gas, which emanates from the earth, was used by the Chinese for lighting and heating purposes in several provinces of their country before Columbus made his celebrated discovery.

For many centuries upon the altars of eastern superstition there burned a fire—the gift from nature's wealth—without awakening in the minds of these primitive devotees the slightest hint or suggestion of its possible value in domestic economy and comforts of life; these people lacked that enlightenment of mind which would furnish them a sense of appreciation of the things that go to make up the essentials of life's happiness and, therefore, it was withheld from them; but what about those who lived the major part of the nineteenth century in the full glare of its civilization when the same benignant flame put forth its glow without arousing any perception that within the circle of its radiance there lurked the power and potentiality which would have given them that higher civilization which through its mighty availability in the economy of life we now so happily possess and enjoy.

Down in the depths of this endless store-house where shales many thousands of feet in thickness un-

doubtedly exist and where heat and vapors prevail, are constructed the work-shops of nature, where since the stars sung together, there has spontaneously gone forward, the secret, silent fermentation and combination of elements which is constantly and continuously manufacturing into that subtle vapor which has found its way up through the various formations that compose the earth's crust and has wasted itself on the desert air for ages, until man a few years ago discovered its great worth—until now it stands pre-eminently in the front rank of one of the world's great necessities.

Does anyone believe for a moment that nature has provided niggardily with this bounteous gift and that the time will ever come when these store-houses will be emptied of their contents? Man still stands on the shores of great possibilities and with his little vision scarce penetrates the wonders that encompass him. We are living in a progressive age and there is no danger but what nature will provide all that man desires for the future. Has it ever failed in providing the material for man's needs when the time was ripe for it in this vale of tears; how about coal, when was it first used and how near exhausted is it?

The existence of natural gas springs in Pennsylvania and adjoining states west of the crest of the Allegheny mountains were known to the earliest settlers.

It is generally conceded that the village of Fredonia, Chautauqua county, New York, is entitled to the honor of having first utilized nature's gift for illuminating purposes. There is, however, some disagreement as to the year it first came into use, some authorities fix the time at 1821, others are equally sure it was 1824. The latter year seems more than likely correct, for it was in the year that Lafayette was on a visit to the United States, as the invited guest of the government and people. The knowledge of the novel experiment came to the ears of the distinguished statesman and soldier and he braved a long and tedious journey to Fredonia by the then primitive means of travel to behold the extraordinary spectacle, the inn and streets being lighted with the gas on the occasion.

It is said that one Starr, on attempting to dig a well at Fredonia for water, found a pesky vapor which came up and spoiled the water and threatened to make his labor of no avail, not wishing to be outdone he made a rude gasometer and collected enough gas to light two or three stores. Another account is in effect that workmen while tearing down an old mill observed bubbles on the water that proved to be inflammable. A company afterwards bored a hole one inch and a half in diameter into the limestone which resulted in giving the town a limited supply of gas for lighting purposes.

It is remarkable how slow the perception of the minds of succeeding generations were to grasp the idea of the usefulness of this volatile fluid and, therefore, many years passed into time before natural gas came into general use for heating and lighting purposes.

Gas was frequently encountered in the drilling of early oil wells, its force often being such as to render a continuation of work impossible. After it was once brought into subjection, and a practical demonstration of its utility and value for manufacturing and domestic purposes made, its general use quickly followed, and the gas well immediately took rank with the oil well as a source of wealth, and as an important factor in the manufacturing industries in which it has become so indispensible. In the oil country and many of the larger towns and cities near the source of supply it has proved a no less important factor in domestic economy, supplying a cleanly, convenient and economical fuel, and greatly reducing the labor of the housewife.

Like the popular ideas of the origin of petroleum, the popular notion of the origin of natural gas is very much varied. From what is generally accepted as fact, the position and quantity of gas depend, in the first place, upon the porosity and the homogeneousness of the sand rock, which is its reservoir; in the second place, on the compactness of the strata above or below the sand; in the third place, on the dip of the sand and the position of the anticlines and the synclines; in the fourth place, the proportion of water, oil and gas, and the fifth place, the pressure of the gas before being tapped. These rules apply more especially ,or at least some of them, to Pennsylvania and West Virginia fields. It is a common fact that where an oil field has been found there has been a corresponding gas field found not far away. Oil and gas were undoubtedly formed and placed in the sand rock by the same agency. The process that filled the oil rock also filled the gas rock. They run parallel and, therefore, gas will be found as long as oil is found and vice-versa.

Learned men have from time to time told us that oil was formed from decayed vegetation, whales, the drippings of coal veins, etc., etc. It seems to us that it was just as easy to make oil as oil and place it in the receptacle where we find it, and find means for its reproduction as it was to make you and me, the great oak tree, the whale and the flea, and provide means by which each is reproduced in its own separate species; and, by the way, this reproduction business is a very interesting study. Why not gas be the father, oil the mother and gasoline the embryo child in the reproduction of oil?

"When the crude embryo careful nature breeds,
See how she works, and how her work proceeds."

In the early days the object was to find oil, and gas in any quantity in a well was considered a detriment, but in hunting for oleaginous stuff many heavy gassers resulted. In after years, when gas became more of a desideratum, the hunt for the now valuable vapor brought into existence large oil pools in most unexpected places.

A well was drilled for oil on the A. H. Nelson farm, five and a half miles from Titusville, on May, 1872, and got a big gas well at a depth of 780 feet. This well had a capacity

of 500,000 cubic feet per day. A two inch pipe line was laid to Titusville and some two hundred and fifty firms and families supplied for heating and lighting purposes, this probably, with the exception of Fredonia, N. Y., and "Buffalo Joe" Stillwell's experiment at Oil City in 1867, was the first utilization of gas for lighting and heating purposes, although it was not until 1885 that the city was regularly supplied.

In April, 1872, Butler county, Pennsylvania, got on the map by striking a gas well on the W. C. Campbell farm. When this gas was accidentally lighted the flames rose to a height of 75 feet and roared like a whirlwind, the sound of it being heard in Parkers Landing, ten miles away. It required two weeks to get the flames subdued, which was accomplished by digging a ditch and clay thrown in it forming a cone that did the work. This gas was allowed to blow in the air until the next year when it was utilized for the lighting and heating of Fairview, Petrolia, Karns City and Argyle. It also furnished fuel for many drilling wells and pump stations. A line from this well was run to Parkers Landing, but the first place connected proved to be the last as during the night a high pressure of gas destroyed the building in which the office was located and the gas people were compelled to remove their line from the city.

Some years later the writer was made secretary and a director of a company supplying Petrolia with gas from this same well. The gas was supplied without meter at a flat rate of $1.50 a stove.

The celebrated Harvey well, located in Clinton township, Butler county, Pa., was struck at a depth of 1,145 feet, and the gas came with tremendous force, caught fire and soon the place was alive with sightseers to witness the wonderful sight. The product was eventually piped to Sharpsburg for use in the mills at that point.

The Burns gas well on the Duffy farm, near St. Joe, Butler county, Penna., was the next big well. It was drilled to a depth of 1,600 feet in 1875. The output averaged 12,000,000 cubic feet of gas per day for a long time. The gas from this well was piped to Freeport, Pa.

The Delemater well, about half a mile from the Burns, had been pumping about 10 barrels of oil per day from the third sand, it was drilled deeper and encountered gas. The pressure from this well was such that the tools weighing 1,600 pounds could be drawn out by hand.

In 1869, a great reservoir was opened up in Winfield, Clinton and Buffalo townships ,of Butler county, Pennsylvania, on what is known as the Brady Bend anticlinal, this reservoir extending over into Armstrong county, and immense wells were found. This gas was piped to the big Ford Plate Glass Works plant below Kittanning, Pa., and to Butler, Pa., for domestic and manufacturing purposes.

The old cry of conservation of oil and gas and the prediction of its exhaustion in no distant day got a rude jolt by the recent gas developments in the same locality of the wells that made such a noise so many years ago. On November 24,

Oil City and other cities its supply ever since. The only place where oil has been produced in paying quantities from this sand is in Concord township, Butler county, Pa.

Natural gas was first used for cremating purposes at Pittsburgh in March, 1886, (Sampson's crematory). The body of Milton Fisher, of Columbus, O., was in a few minutes reduced to a few ashes; those present declared it was a great success, but Fisher himself did not pass any judgment upon the process.

In 1873 gas was used under boilers on the Columbia wells.

In 1883 search for gas territory led the opening up of many new pools.

Undoubtedly the largest gas well ever struck was the "Big Moses," the property of the Victor Oil Co., located east of Sistersville, W. Va. The well broke loose on February 9, 1895. This well had a rock pressure of 725 pounds, with an open flow pressure of 78 pounds. The gas was encountered in the "Big Injun" sand. The gas percolated through the earth causing the ground to open up like as if it had been shaken by an earthquake. A farmer's water well half a mile distant was made to bubble as if a fire was under it.

A good second to the "Big Moses" well was the "wild cat" well drilled for oil by the New York Oil and Gas Co., about four and one-half miles southwest of Caney, Montgomery county, Kansas. This well was dry in the Bartlesville sand (where oil was expected) and the drill was continued until it encountered an immense gas reservoir at 1430 feet. The well was fired by lightning and continued to burn for five weeks until finally overcome by unceasing toil.

The flame from this well shot up in the air in a great column of 225 feet, symmetrical and splendid, swaying to and fro in the wind, lighting up the country for miles around. A newspaper could be read two miles away and the light in the heavens could be seen for 60 miles around. The output of this well yielded at the start 72,000,000 cubic feet.

We do not wish to carp at the work done by the geologists for some of them have rendered valuable services in gathering the records of wells and the geology of the defined oil region, but after all the drill is the only true guide to the development of oil and gas wells and it has been very active in producing surprises in the past and will continue, no doubt, to furnish some for the future.

It may be said truthfully that geologists have been predicting the failure of the supply of oil periodically, since 1865. At one time there was a line drawn north of Tidioute, where the oil bearing rock ran to the surface, and a line in Butler county, Pennsylvania, where the rock dipped so much that it would be below sea level and would only produce salt water. When the 100 foot was first pierced in Butler county and the tremendous rush of salt water resulted some thought that the prediction had been realized, but this sand proved to be rich with oil.

We do not believe that there is any geologist that can figure out by

any process of calculation how much oil or gas is still remaining in the bowels of old mother earth. In 1882 Henry E. Wrigley, long since gathered to his fathers, at a meeting of learned men at Washington, D. C., stated that the total production to the commencement of that year had been 154,000,000 barrels, and that but 96,000,000 barrels of oil remained to be got. In 1885 another Penna. survey man, Prof. Ashburner, placed the total product of the oil regions up to the commencement of that year at 261,000,000, stating that "without question the product had passed its meridian, but no estimate could be made of the total aggregate for the future, that the cost of producing a barrel of oil would soon be so great that the oil men's occupation in Pennsylvania and New York would soon be gone." The geologists of today are a little more liberal as to the supply of oil still left in the rocks, placing the amount at over seven billion barrels. At this rate of increase we should at the close of 1952 have fourteen billions of barrels of oil stored in the ground.

With the discovery of oil in Titusville in 1859, the many wells that followed yielded more or less gas, and the first public notice taken of the quantity was the terrible holocaust occasioned by the lighting of the gas that came from the Rouse well, on Oil Creek, when many lost their lives and others were disfigured for life. The gas at this period was considered more of a nuisance than an article of value, and but little of it was used as a fuel—it was mostly led from the wells in pipes and burned so as to dispose of it. Any one who has followed the trail cannot fail to remember this great waste of valuable fuel.

This waste of natural gas in the years gone cannot be estimated but as an illustration it is only necessary to go back a very short time to when the Cushing, Oklahoma, field, the greatest oil pool ever discovered up to the present date, was producing about 30,000 barrels per day. It has been estimated that the waste of gas from flowing and drilling wells was in excess of three hundred million feet a day, at the domestic rate of 25 cents per thousand the daily loss was $75,000, more than thrice the amount that was being realized from the oil.

In Indiana, in 1887, natural gas had got to be so plentiful that the farmers harvested by gas light.

In 1887 Pittsburgh had six natural gas companies competing for the business of supplying the growing demand for heat and light and also manufacturing purposes. These companies had 110 wells and supplied the gas through 600 miles of pipe of which 232 miles was within the city limits. The total capacity of the lines was 250,000,000 feet.

In conclusion it is only necessary to call attention to the remarkable success achieved by the gas companies during the past year and the great promise for a record breaking one that is just entering upon its potential possibilities. Our next article will be under the caption "Looking Forward" and will treat the subject of oil and gas from its present status and what may possibly occur in the years to come.

Some Interesting Information Regarding the Drilling and Operation of Gas Wells.

Everything in this life seems to have its draw-backs, even producing gas has its incomprehensibilities, as herewith set forth by a well known writer. That rhythmical consonance of harmony of what should be expected from well behaved meters appears to be lacking in this particular instance, however, there is only one thing that represents the embodiment of order and harmony that comes under our knowledge and that is the Universe itself.—Editor.

Friend Charlie:

As there is always more or less public interest connected with the production of oil and natural gas, it follows that any attempt to satisfy the curiosity aroused by that interest becomes an endeavor quite beyond individual advertisement, even when expressed in the personal pronoun form. Such being the case, I am pleased and, hope, justified in furnishing you with the subjoined account of my modest identification with the business itself.

First of all, permit me to say that the word "business" is such a flexible and elastic phonetic or sound, that it may be doubted if its use in any description, serious or humorous, of the hazardous endeavor of obtaining either oil or gas, is justifiable. In the larger defining books the expression "business" is explained in various ways; such, for instance as: "the state of being industrially engaged;" "to apply one's self steadily to work;" and, paradoxically, "the state of being anxious; anxiety, care."

Producing oil or gas is a perilous adventure somewhere within the phrases "industrially engaged" and "the state of being anxious;" neither of which, in themselves, completely picture the enterprise. The honorable words "Labor" and "Toil" are not applicable; the "business" is neither flesh, fowl, fish nor good red herring, in my judgment.

But, to return to "our tenderloin" and the relish of its gayeties! My experience began in early youth with a 5,000 barrel oil well in the Thorn Creek field of the 80's. This spouter was followed in due and regular course by divers dry and dusty ventures which increased knowledge but led me away from the pleasant path leading to the cheerful office of the popular oil region specialty known as the "Purchasing Agent." When one has nothing to sell the Purchasing Agent is afflicted with writer's paralysis, indigestion and lack of pleasantries. He looks then quite like a clergyman at a funeral. The Agent was a friend once, a valued friend;

he turned his back, however, when he learned that I had nothing to transfer but Knowledge. It is, indeed, a fearful thing to be "knowful" in connection with the oil "business;" and such equipment did I have after old No. 4 began to dust out bills and notes and protested paper.

The total result of my early endeavors was an obsession, a fetish —an idea that I knew, really knew, something about the producing "business." This thing was a shadow in the day and a dreamy devil in the night. It never left me. Like Poe's black raven, it tapped upon my window, perched upon the pallid bust of Pallas; and, when I inquired for the "lost Lenore," it answered in monosyllables only.

Many years passed in such obsession. Finally through the kindness of a gift-man, a tract of land over a mile square came into what may properly be described as my "perplexities." In other words, I suddenly found myself the largest owner of a property which was handled, exploited and controlled by others. This property, once highly productive, was in total collapse when it fell to me. A fine crop of tax bills alone did it then return. Lawyers, administrators and agents had been enriched by it; there was a missing heir and an incompetent connected with it. Vainly did I try to unload it upon some optimist—there was nothing doing just then! Several mild-mannered gentlemen, connected with oil region banks and loan concerns, were good enough to assure me that they "knew" the tract; that they had inquired about it; that from their information they doubted if it was worth two ($2) dollars per acre; and, as for collateral purposes, they would be dubious as to accommodations upon it at the rate of fifty cents per acre. The mild men were evidently afflicted with knowledge, such knowledge as I myself possessed regarding the oil line.

Well, to make a long story short, I fell back upon my devil and began to talk oil. Surest thing, you know, I said, there is oil on the tract! The nearest producer was, like the kingdom of the Lady Claribell, "only three leagues away." What mattered it if there was a dry hole to the north and another to the south, with several to the east and countless ones to the west? These dry ones proved merely that the fluid must be on the tract—they were the lighthouses guiding the bold to wealth and ease! Such was the tale poured into the ears of the "talent," i. e.: field men made wise by experience in the oil "business."

The talented ones are most interesting folks. They have their characteristics, among which may be mentioned great knowledge of forgotten ventures; a mixture of courage and timidity; a strong detecting sense of any self-interest on the part of the lessor or landowner; and a marked disposition to take with the proverbial grain of salt any eloquent statement of possibilities if unaccompanied by a cash tender. Even when the cash is tendered they are often inclined to regard it as a lure. For several consecutive years I waylaid the talent. I talked to them in divers tongues and all in

vain. They knew the cursed tract and all its neighborhood and could locate the dusty ones. In the end they dodged me, even as the mild-mannered bankers did when I sought an accommodation. To them I was a "nut landowner" and in real kindness several of the fraternity advised me to "let the no-good stuff go at tax sale."

Among those who "saw me first" whenever I arrived in town to talk lease and operating, I may mention with respect and admiration Mr. Mike Finnessy, a genial man; Mr. Zeph Lauffer, a friend and brother of the lodge in the wilderness; Mr. Al. Butler, who once endorsed my paper (Didn't I have a chance then?); Mr. Elmer Kelly, dead-game chance taker; Mr. John Snee, immortalized by discovering the oil producing sand known as the "Snee;" Messrs. Phillips Brothers, miracle workers in the material sense. (While on the "miracle" subject, read the remarkable book written by the distinguished father of these operators, the late Thomas W. Phillips, one of the greatest of oil men). These leading lights were succeeded in the course of events by desperate individual pikers, some of whom were delightfully ladened with the well known oil country odor of onions and whiskey. They one and all turned me down. Some of them, I may mention here —by way of confusion rather than of criticism—afterwards took their chances on the Evans City town lots, 20 feet by 80 feet, after rejecting the mile square stuff.

Finally, however, I found my Aladdin with the magic lamp and none other was he than Mr. Theodore Barnsdall, the operator incomparable, Prince of Oilmen, the one who has, probably, enriched more holders of property, opened more new fields and drilled in more wells than any single individual connected with the "business" from the historic days of Drake down to the present moment. Ah! what tales he could tell, what information he could spread, what gayety he could dispense, could he but be induced to write, while yet among men, the story of his magnificent economic life. Just how Mr. Barnsdall was enticed to the no-good tract I cannot really say. My opinion is, however, that the picturing of the possibilities in that desolate and virgin locality by Mr. James W. McKee, recognized field authority, was the final determining factor.

Yes, the lease was eventually taken by Mr. Barnsdall, who agreed to drill a certain number of wells within a given time, or pay rental semi-annually. Time again passed, with no drilling under way. Then a cancellation was declared upon 225 acres of the tract, same being considered "condemned" by an ancient venture of the 70's. Again that "tired feeling" overcame me and, in sheer desperation, after a battle with the representatives of the missing heir, the committee of the incompetent, the lawyers and administrators, I forced a public sale of the tract to the "highest bidder." I was warned that no one would bid; that the sale would be a subject of ridicule and that costs and expenses would merely run up against the owners. All of which

would have been realized but for Mr. Barnsdall. A certain lady, having heard of his achievements with the drill became, somehow, convinced that if "Mr. Barnsdall thought well of the land it was worth buying." Hence when the sale occurred at the court house she kindly ran up the price of the first and larger parcel (554 acres) to an attractive figure and obtained same. The condemned 225 acres were then knocked down to me for almost nothing, no one else caring for the portion.

To this courageous lady my thanks are due. In this populous vale of tears there were no bidders for the land save herself and the writer—a fact which quite staggered me.

Out of the hands of lawyers, administrators, committees and agents came the tract in this manner. Immediately following the sale things began to brighten with the strange fatality of events. Mr. Barnsdall completed his long overdue well and it showed up good and strong as a producer. This pleasing result was not, however, without its anxieties and annoyances. I was told that I had let go of the best end of the property; that the 225 acres were under distrust and no one would care for same as an operating unit; that Mr. Barnsdall would drill dozens of wells away from rather than towards the said acreage. For the time being it did look as though the sunbeam had escaped me and, again, the talent "saw me first." Back I turned to the legal profession for comfort and advice and was taken in, bag and baggage. A company, or partnership, was formed and Well No. 1 began on the condemned parcel.

Right here commenced what may be termed my "education." My honest and courageous associates confessed they knew nothing real about the "business" and did not wish to; the venture was a side issue only to them. One of them, however, had a friend who was a contractor, a very reliable man, he said, strictly on the level. Perhaps this chap might be a little sluggish and slow but, nevertheless, he could be relied upon not to drop a bar of iron or a wagon load of steel into the hole or to take other liberties with our property and equipment. Why not hire this contractor? Why not? Of course we engaged the man. He had a rig, a good rig; an engine and a boiler, a set of tools, an auto, and a telephone in his house. Lucky we were, indeed, to secure such a needful fellow! We could lay our hands on him at any moment; we could use his auto. Fortunate association! Never was there such a fine combination of circumstances and individuals.

Well,—operations were eventually begun, but just when they will end is mighty uncertain. The contractor chap declared he wasn't very handy with pen or pencil, so he did not keep a book record, as insisted upon, of his daily progress. He was quite uncertain as to minor matters. He cased off the fresh water at 495 feet, he declared; the fact that a vein of salt water was encountered a few feet further down did not matter; there was no use in pulling out the iron and shutting off this

vein; at least our friend, the contractor, thought so. On he went merrily with his bouncing drill. It didn't matter in the least that he encountered a bunch of gas a hundred feet or so below the said salt water. The partnership was after oil—gas was a nuisance, especially stray gas in the upper formations.

The hundred foot sand was reached eventually. It was a fine, soft pebbly sand. No matter as to that —it was oil the company sought! Oil wasn't found in the hundred foot in that locality. On with the work—keep that drill jumping! At 20 feet in the said hundred foot sand the drill jumped once too often for the contractor. Gas in immense volume came thundering out of the casinghead and wasted itself into the air. The salt water was showered over the dazed contractor and, willy nilly, he had to stop this side of the rock with oil in it. Off he went in his auto, leaving lawyers and all, to handle the problem.

And a problem it was, indeed—a roaring, spluttering gas well with water in it; no saving devices provided in advance, and no one with definite knowledge at hand to tell us what to do and how to do it. The contractor! Sure enough—the saving factor! Call him on his house 'phone! Get him back here in that auto in double quick time. Tell him all speed restrictions have been suspended for the day. What's that you said? Auto broken down; telephone don't work and current too weak to carry the message even if it worked! Gee, is it any wonder the average oil man is rather profane?

In the end we found the contractor who confessed that as he was not "quite sure" where he had encountered the salt water he did not just exactly know what to do. It did not matter, however, as gas was just as good as oil and, sure, there was a lot of gas blowing off into the air. How much? Don't just know, but those fellows coming up the road yonder in the buckboard wagons will tell you alright—they are the buyers for the gas distributing companies. They can tell the size of a well by merely looking at it. They are a wise bunch, they are. Each one of them has a gauge, too, in the hind pocket of his pants. You know they gauge the well first, then buy it, if for sale; or put it on the meter if you give them the gas output only.

They arrived finally—the gauge chaps, and a merry lot they were. They began their quantity estimations by a guessing bee, the guesses ranging all the way from 500,000 cubic feet output per day to 2,500,000 cubic feet. In due time they verified their guesses by attaching their gauges to a vent pipe which the contractor, in the meantime, had succeeded in installing. Strange to say the various gauges coincided with the guesses! Into my mind, then and there, flashed the idea that there should be a legal standardization of the gauges. The basis of the preliminary bid or purchase offer to the operator is necessarily based upon the gauge. Surely the operator, the producer, should be protected against inaccuracy. Suppose but one gauge, the one registering 500,000 feet, had been the sole basis of future negotiations! Where would

we have landed? Against the meter, you say? Well, there will be a few words on the meter hereafter.

So we had a gas well, a good one too, instead of an oil well; but, mark you, it was a gas well with water in it. Suffice now to say that for several days the product was lost in the air. Finally, control was obtained and the flow "shut in" or confined. A contract was duly drawn up with a fuel company whereby the gas was disposed of to them at the rate of eight (8) cents per thousand cubic feet. This was above the current rate and was based on the gauge indicating a million cubic feet output per day.

The fuel people consumed nearly a month in laying a six inch supply line to the well. This completed, they installed their orifice meter in a small house on the top of a high hill, about half a mile away from the well itself. The high elevation, we were told, was to prevent the water getting into the meter—the delicate, reliable and unquestioned meter, which would measure down to the fraction of an ounce. On its recordings we would be paid.

Surely the meter, especially the orifice brand of meter, is a most wonderful piece of mechanism; the most wonderful thing about it being that, apparently no ordinary being can explain, elucidate or illustrate its workings, the daily ink-marked registerings which are translated into terms of dollars and cents by a machine of some sort or other. The fuel company field men do not appear to understand the translating machine work, it seems; nor do the inside machine handlers understand the meter charterings, which are circular lines traced by needles upon a white disk. These circular lines are respectively in black and red. The black line, we were informed, indicated the main line pressure; the red one the volume flow of our well. Yes, all was plain as mud and understandable as a woman's whim.

The meter began its work by a verification of the guess and the gauge. It recorded, say, the million cubic feet output estimate of the company's field man, which was, no doubt, highly satisfactory. For several days there was little or no change. Then, suddenly, there was a drop down towards the 500,000 guess and gauge. This was explained to be due to increased line pressure—there being little demand for gas in the then hot weather and, consequently, there was a gathering and back pressure in the main line against which our well was working. It would be all right, however, when cold weather came on, you know. Increased consumption meant less line pressure and the million feet would surely pass through the meter each day. Strange to say the black line chart stood stationary at 10 all this time and our well volume pressure varied not from day to day.

Soon, in a couple of dwindling months, there was another drop to the one hundred thousand feet mark, and we were told the water was gaining on the gas. The pressure was off the main line, cold weather having arrived, and consequently there must be something wrong with the well itself (we were informed)

or it would be yielding its initial output. What was to be done? A very simple thing; it won't cost much! Install a ¾ inch reverse motion tubing equipment inside the 2 inch tubing. This will enable the gas to blow off the water through the ¾ inch opening easily and give it access through the 2 inch to the meter. No power or pumping jack will be needed. It is a cheap device and a good one. So in it went, the ¾ inch stuff, and the association treasurer paid the bill cheerfully. It saved us about $500, he said rejoicefully.

In the meantime the contractor, with the auto and the handy 'phone was busy with No. 2 well. This well had been located up a ravine to the north of No. 1, near a spring. The country was a watery waste about No. 1 and the contractor preferred the dry land to swamps and bogs. He hit the hundred foot, but it was quite unlike the hundred foot in No. 1, being hard as a grindstone and devoid of anything, even water, which he declared he was afraid of in No. 1 and hence had not drilled through same or even supplied a pocket. On he went, however, with No. 2, finally landing in the rock below the third sand where a volume of gas, limited in output to be sure, but paying in quantity was encountered and turned into the six inch line leading to the meter house on the hill top. Thus we had two producers working against a single meter.

Yet we were in perplexity, inasmuch as the recordings of main line and well pressures remained, generally speaking, the same, while our returns in cash fell off day by day. Again the question arose: what was to be done? At this juncture we encountered the long looked-for friend. This party was one of the illuminati; one who knew the gas business from A to Izzard. He was a cheer dispenser, as well as a problem solver. The thing to do, he whispered, is to do just as the gas supply chaps do when their lines begin to weaken in cold weather. What is that, he was asked. Pump in air, he said sententiously, and start that danged meter speeding towards the cashier's office. It is a poor meter which will not work on both sides of the street. Air is plentiful and the meter can't tell it from gas. Pump and be happy.

Oh well, education has to be paid for. Our No. 3 is now awaiting a supply of water, which the good contractor tells us may be expected about the time of the arrival of the second deluge. He is busy on a well in another section for a friend and so No. 3 must wait for water. Sure, the no-good tract is a section of bogs and swamps and rills and rivulets, but there is sulphur in the fluid, and hanged if he is going to run his boiler to oblige a bunch of lawyers who would sue him for a lot of coal which wouldn't burn if soaked in pure alcohol or genuine B. S. He will write or phone when he gets ready to start; and by the way, he has just seen the fuel company's field man who says that No. 1 well has stopped producing. Nothing to do now but lay down $500 for power and pumping jack, which should have been put in long ago. Too bad the pocket wasn't drilled in No. 1.

There is no water in the hundred foot in that section; no water anywhere but in the creek and the run and the swamp, and that stuff is sulphur water, not fit to use in a Christian boiler. You chaps, however, have water in No. 1 all right, just don't know where it comes from, but it is there. Better there than on the brain. May cost you something, but it is not fatal. Good bye, will write you or phone you when I get my auto back in shape and the roads dry up.

So this brings us back to our starting point, viz: business. The gas producing business is truly a "condition of anxiety, a state of perplexity, a conflict of meter and nature, of guess and gauge." Keep out of it, friend, unless you can find a meter which will run both ways —forward when you sell and backward when you buy.

Without genuine knowledge, the tenderfoot is sure to find himself, in the end a member of the Owen More Gas Co. It will be recalled that Owen is the subject of the regional song, beginning:

"Owen More left town one day,
Owin' more than he could pay.
Owen More returned one day,
Owin' more—owin' more."

—SHAMUS O'TOOLE.

OVER OLD TRAILS.

Washington, Pennsylvania--One of the Keystone State's Educational Centers--The Discovery of Oil and Gas Transforms the Straggling Village Into a Commercial Center--A Chapter of Incidents.

By John L. Hunter.

THE early history of the counties lying along and in proximity to the Monongahela river, reads of one long and continuous warfare with a savage race, who resented with fire and the tomahawk the invasion of the whites into this section of Pennsylvania. Strange to relate, but few records were kept, it appears, of individual exploits, but the story of Washington county, as could be learned from the older residents and from compiled papers, is one in which the indomitable will and courage of a few brave settlers triumphed in the struggle for a home in a wilderness peopled by savage beings who sought to menace and destroy. With the driving back of the aborigines, who disputed every inch of ground, sites were

selected in different localities, on which the pioneers built log cabins, this banding together was for the purpose of protection from the Indians. The site of where stood a number of the early day settlements of Washington county is a fast fading memory, while others are marked by more or less towns of note, Washington being one of the latter.

Washington is situated in the heart of a rich agricultural section of the state . It not only excells in this line, but the surrounding hills and valleys have been found to be underlaid with a rock formation, carrying both oil and gas, the story of the discovery of which make one of the most interesting chapters in the history of the county as it set the wheels of industry going on a new plane. It created a demand for field material, which led to the building of manufacturing plants, bringing to Washington scores of desirable citizens, whose progressive ideas, coupled with the help of those who wanted better things for the settlement, brought about a new order for the once sedate and nonprogressive town.

Today Washington, with a growing population, paved streets, fine colleges and schools, handsome residences and elegant stores, is the leading town of Washington county. It is connected with the outside world by two lines of steam railroads, the B. & O. and the Pennsylvania, a narrow gauge road also connecting with Waynesburg, 18 miles south. An hourly schedule is also maintained by trolley between Washington and Pittsburgh, a beneficial asset much appreciated.

The Gantz Well.

The opening day of the Washington field dates back to the spring of 1885, when the Hart Brothers (contractors) drilling on the Gantz property, opposite the Chestnut street railroad depot, West Washington, found the Gantz sand carried oil. The well was completed on January 1, making a small flow the following day. The derrick was boarded up, guards placed and no one was allowed to become too inquisitive. This making a mystery of the well soon spread and every move was being kept careful tab on by close watchers. On the second of February, the well made a flow of 25 barrels, when it was decided to treat the sand to an 80-quart shot. When this knowledge became known in the village, closely followed by the report that there was a likelihood of the powerful explosive demolishing the entire settlement, the more timid, and it is said they were in the majority, gathered up their valuables and lit out for the back hills, nor did they show up until scouts carried them word that the town was still intact.

Following the shot the well filled up 1,000 feet. Later it was drilled to the Gordon sand and produced oil until three years ago.

The Peoples Gas company were the next to enter the territory, completing their first test October 1, which produced 130 barrels the first 24 hours. It was the drilling of these two wells that led to the discovery of the famous white sand pools scattered over Washington and Greene counties.

Interest in the field was growing

by leaps, which was augumented by a gusher being struck on the Smith farm two miles east of town. When this became known to say excitement prevailed is putting it in tame language. The little, sleepy country village awoke from its Rip Van Winkle sleep as if by magic. Then came an invasion of Washington county by leasers and operators from McKean, Warren, Venango and Butler counties and a storming of the castle took place. To digress for the moment; up to this time the majority of residents of Washington were God-fearing, home loving people who had been taught to "touch not, handle not, unclean things." From the far north regions had come the report that among the hills and in caves along the Allegheny river, there dwelt a race of beings who made their living by digging holes in the ground, from which they secured a liquid which they called Seneca oil. They had also been told that the cave dwellers were only partially civilized and, as the oil along the river was fast giving out, a band was heading toward Washington. It was even reported that they believed not in the sacred ties of wedlock, that it was pollution to touch their hands. We have it from good authority that a certain divine, in closing his message to his flock said: "My dear brothers and sisters, we are living in perilous times. The wolves are amongst us, they are at your very doors. Keep your spiritual lamps trimmed and burning; shun these people as you would a viper for they come to deceive. Mothers, look carefully after your daughters and fathers keep a watchful eye on your sons. Pray without ceasing and may the Lord be with us." That the reader may learn how strong a belief that the stories told about the degeneracy of the oil men had taken root in the minds of some, the amusing story is here given. With the first Taylorstown excitement operators had difficulty in securing lodging, owing to their reported bad records. One day a little six year old tot, upon seeing a driller driving to work with a bundle of hay tied back of the buggy seat, ran to her mother saying: "Mamma, do the oil men eat hay?"

"I don't think so, my dear, as I have heard they are partially human."

In February, 1886, there were nine completed wells in the Washington field with a daily production of 765 barrels. High water was reached the same year, production reaching 17,000 barrels. For a time it held around 14,000 then rapidly declined to 7,000, notwithstanding there was no let-up in development.

With the striking of the Smith No. 1, there appeared on the scene the indomitable John McKeown, one of the most daring and persevering oil operators of his day. We here give a short sketch of his life figuring in oil circles.

Sketch of John McKeown.

(As told by one of the field operators.)

John McKeown, of Irish birth, arrived at New York the day following the assassination of President Lincoln. Great excitement prevailed and overhearing one man say

to another, "It is the most terrible murder in history," he inquired if some landlord had been murdered, as in Ireland it was considered a state crime.

From New York, McKeown went to Petroleum Center, where he worked at digging tank bottoms and whatever his hands found to do. Saving his money he soon amassed considerable wealth and got into the game as a producer in Butler county. During the early excitement it was a fighting game and one that did not stack the cards at all times as he would wish, he both made and lost money. When the word came that McKean county was looming up as a producing field, he was among the first to enter the territory, where he cleaned up well onto a million in a short time. One blustery winter morning in February, 1886, he was walking along the main street in Bradford, when he heard a messenger boy, employed by the Western Union, cry out that they had struck a flowing well at Washington, Pa. McKeown had been keeping an eye on the field and upon hearing of this, he went to the telegraph office where he learned who had struck the well. With this information, he went direct to the railroad depot, purchased a ticket for Pittsburgh, arriving there in time to catch a train over the Chartiers Valley for Washington. A terrible snow storm had been raging for the past twelve hours throughout the Pittsburgh district and when he stepped up to the ticket window, two men, whom he recognized as holding interests in the gusher were being informed by the agent that it was impossible for them to get to Washington that night as the road was so badly drifted no train could get through. When McKeown heard this, he stepped to the window and, after bidding the men a pleasant greeting, he asked the agent for a ticket for Philadelphia. This was given him and he left the depot, by chance overhearing one say to the other: "One thing, if we can't get out tonight, we have got rid of John McKeown anyway, he don't know anything about the well."


KIGHTLINGER'S STEEL DERRICK.

But they did not reckon with that lump of resourcefulness that lay in McKeown's brain matter. Leaving the station, McKeown went to a livery barn and asked for a team to take him to Washington.

"Why, man," replied the proprietor, "that is out of the question. I could not do so, as there is no team

could live the trip out. The roads are badly drifted."

"Let me have the team and I'll get there. I have hired half a dozen Irishmen with shovels and we'll get through."

"Can't let you have a team for the reason that I know you can't get there tonight."

"Then I'll buy the team. Name your price for I must be out there by morning."

"Who in thunder are you, anyway?" asked the proprietor.

"I am John McKeown, of Bradford."

"If you are John McKeown, the rich oil man, you can have any team in this barn."

"Well, that's who I be. Now ye hurry up while I round up my Irishmen down at the hotel."

With a big, strong team and six able bodied Irishmen with as many shovels, McKeown left Pittsburgh for Washington, twenty-eight miles distant, where he arrived at three o'clock the following morning, putting up at the Auld House.

Upon being informed by the clerk where the well was located and the names of the owners of the nearby farms, he, after some delay hired fresh horses and accompanied by his helpers with shovels, drove out to the Munce farm, which adjoined the one on which was located the gusher. Mr. Munce had arisen and was in the act of kindling a fire in the cook stove when there came a rap at the door. His answer of "come in" was followed by McKeown's entrance who, after a salutation, made known that he was there to lease the farm.

"Yes, I will lease you my farm, (which comprised between six and seven hundred acres), but I will have to ask a small bonus."

"What bonus do you want?" was McKeown's reply.

"Two hundred dollars per acre," said Mr. Munce.

"All right, I'll give it; get ready and come to town with me."

"Stop and have a bite of breakfast with me and I'll accompany you."

Two hours later they were seated in a lawyer's office, where the lease was made out and duly signed, but when McKeown offered his check for the bonus money, $40,000.00, the amount so staggered Munce that he refused to take it unless, as his lawyer said, it must be certified.

"Call up the Fort Pitt Bank at Pittsburgh and ask if John McKeown's check is worth that amount."

When this was done, the answer came back, "Yes, for a million."

Many are the stories told of the late John McKeown while operating in the oil regions. His success in amassing wealth was not alone confined to producing. Keen of perception, he watched the oil market, buying at the right time to dispose at a good profit. He was one of the big oil producers of his day and had many friends who lamented his passing out. Hard work and exposure undermined his once rugged constitution and he obeyed the call of the grim reaper. His younger son, Scott, resides in the beautiful home built by him in Washington, and who is superintendent of the McKeown Oil Company.

Washington and Greene are two of the greatest gas producing counties in the state. Though decreasing in volume, the decline is slow, there being little doubt that, with the West Virginia fields, there will be an adequate supply for domestic purposes for many years to come. The idea has taken root in the minds of a number of consumers that air is pumped into the lines in order to secure greater dividends from the actual amount of gas passing through the meter. The truth of the matter is there is nothing in connection with the gas business that is watched more carefully than not allowing air to get into the lines that lead from the field to the consumer.

To those who have never visited a field where gas is produced for a commercial purpose, it would tax the most imaginative mind to conceive the enormous expense incurred before the turning of a throttle releases the gas that cooks your meal, heats the parlor stove and creates the power that revolves the wheels of factories. This expense does not cease with the completion or installation of plants and laying of lines, but goes on year after year, as wells steadily decrease in production, requiring the drilling of new wells at a cost of from seven to ten thousand each, not omitting those in the dry column. The continual doctoring of the older wells and replacing worn machinery draws heavily on the receipts.

Manufacturers Light & Heat Co.

One of the big companies operating in Southern Pennsylvania and Northern Virginia, with main offices in Pittsburgh and field plant in Washington, Pa., is the Manufacturers Light and Heat company. The company controls several thousand acres of gas and oil territory in Washington county, a fractional part being owned in fee. One can have some idea of the growth of the company's business when he learns that but a few years ago a drill press installed in a small frame building constituted their repair shop. To keep pace with the rapid expansion in field work a site was selected on one of the principal streets and buildings erected on plans, though in a sense continuous, each department is separate. Facing Wheeling street is a two story brick with office rooms in front. In the rear of the office rooms is a large show room where is displayed gas ranges and cooking stoves, and next to the display department, separated by a court, is the smith shop, equipped with a large assortment of tools, including a modern welding device, the heat derived from a mixture of acetylene gas an oxygen. By this method, 6,000 degrees of heat is obtained. The device is found practical in welding joints of casing, etc.

Including the basement, a three story building facing Cherry alley, is utilized in general repairing of gas and steam enignes, meters, cutting and threading pipe. In fact, with every department installed with machinery for turning out new work and in the repairing, the plant doing the repair work for the company's entire system, thousands of dollars are saved annually.

Mr. A. D. Kightlinger, for the

Foreman Charles Stainbrook, a former Meadville, Pa., man, whose petroleum career goes back to the McKean county excitement.

With Kightlinger in the Field.

Accepting an invitation to accompany Mr. Kightlinger on a trip through a section of the oil and gas field, I climbed aboard his Henry Ford, the machine was headed out the Washington pike, a superb highway, cutting diagonally across the county, and connecting Wheeling, West Virginia, with towns on the upper Monongahela river. It was an ideal September morning for a country spin, just enough wine in the air, a spirit exhilarator, to make one forget the puny matter that he was not part owner of the business blocks passed as we spun through the silent streets or the highly cultivated farms passed farther on. We say silent streets, as the rays of a morning sun was tipping the tops of the hundreds of elevations that encircle the town, as we left the highway and rolled along over a dirt road for a few miles, swung to the right, climbed an incline and drew rein at a modest little farm house, where Mr. Kightlinger left an order for a four course dinner for two. We were now in an oil producing section of the Manufacturers Light and Heat Company's holdings in which considerable new work was in progress. A mile further and the unsteady cough of a steam engine told of a drilling well. Half an hour's hob-nobbing with the crew and we returned to test out the four course menu spoken of, to find that the traditional Pennsylvania women famed for getting up palatable meals, still holds good.

Gayman Compressor Station.

A part of the afternoon was spent calling at the different drilling wells, pumping plants and new locations where derricks were under course of completion in the Pleasant Grove field, East Findley township. Afterward Mr. Kightlinger headed his Henry Ford for Marianna, a mining town on Ten Mile creek, where is located the Manufacturers Light & Heat compression station for the Washington county district (see cut), where we arrived, owing to the Ford being carefully guided around numerous mud and chuck holes, in a safe and presentable condition. The plant is situated on the left bank of the stream, the grounds surrounding the works being terraced to completeness. This, with the homes of the station employes freshly painted, made a pleasing picture and restful like, as the darkey said to his best girl: "Dinah, you am sure restful to de eye." The plant is installed with powerful pumps and is one of the complete compression stations of the gas fields. The Gayman station is in charge of A. L. Flowers, engineer, who has been in the company's employ for the past 12 years. V. O. Ross is sub-foreman and has been with the company 16 years.

The return was made by a different route and I was given a view of one of the most beautiful farming sections of Washington county. We passed old colonial homes, fast disappearing links that connect the present day to those of the settling

up of the country. A few miles run from the plant and we struck the National Pike, one of the first highways of travel built through Southern Pennsylvania. One of the principal villages passed through enroute was Scenery Hill, said to be the highest point in Washington county, between the Monongahela river and Wheeling, W. Va. From this point it was truly a magnificent view. It was one vast sea of wave-like hills, dotted here and there with palatial homes, patches of timber, orchards and well tilled fields and pastures, on which grazed cattle and sheep. It was a glimpse of God's country not soon forgotten.

Main offices of the Manufacturers Light and Heat Company are located at 248 Fourth avenue, Pittsburgh, Pa.

The officers are: President, John E. Gill; Vice President, James I. Buchanan; Vice President, L. A. Meyran; Treasurer, G. W. Ratcliffe; Secretary and Assistant Treasurer, H. E. Seibert; Assistant Treasurer, C. H. Geilfuss; Auditor, F C. Leslie; General Manager, T. O. Sullivan; Assistant Manager, M. B. Layton; District Manager, H. A. Quay.

List of the efficient employes located at Washington, Penna.:

City Plant—A. D. Kightlinger, district foreman; Chris. Stainbrook, oil foreman. City office force, Carl C. Stainbrook, W. C. Conners, L. C. Doubleday, W. E. Wolfe, Olive L. Lemon. Bookkeeping force, W. P. Simons, agent; H. A. Rogers, cashier; W. L. Dunn, collector; E. K. Marshall, addressagraph; James Myers, L. C. Sando, N. E. Jones, meter readers. E. L. Marshall, foreman; I. W. Iams, assistant foreman.

Machine Shop — Hose Shaffer, foreman; E. P. Rosecrance, E. R. Nesbit, Victor Cignon, and W. M. Schiver, machinists; B. J. Heer, blacksmith; D. J. Burns, shop clerk; George Nelson, domestic meter man; H. L. Sondo, driver; John Cushing, Arnott Chivers, Homer Lloyd, helpers; Russell Prigg, diaphragm maker; W. C. Markley, boiler maker.

Drillers—T. W. Kergon, E. C. Uezie, I. J. Wolfe, J. R. Loughman, G. L. Poppleton, A. A. Kightlinger, Thomas Foley, Vance O. Ross, subforeman.

Tool Dressers—Edgar O. Grim, H. L. Steele, Wm. Whitener, H. G. Wolfe, Adam Burkhart, James H. Meeks, Clinton Powers, and Charles Myers. Roustabouts—Lewis C. Elliott, A. G. Patterson, Elmer Steele, G. McCausland, and H. D. Wyland. Pumpers—A. S. Gray, L. M. Wolfe, W. H. Buffington, J. D. Donelson, Emmet Wolfe, J. F. Scott, A. M. Day, W. O. Davis, R. S. Rogers, Jas. M. Stewart, Owen Wright, Alfred L. Landers, Glen O. Eakin, S. C. Ross, F. E. Hummell, George F. Kightlinger, H. C. Smith and C. J. McMahan. Well Blowers—James H. Mawou, E. J. Matteson, S. L. Day, T. U. Guthrie, and James Myers. Meter Reader—N. B. Gray. Fitter—J. A. Craven. Hostler—Thomas Carroll. Line Walkers—Lawrence Miller and John Hunter. Laborers—Charles Uoruer, L. A. Maxwell, Alvin Johnson, Clark Post, Fred Postlethwait, Carl E. Stainbrook, Paul Stainbrook and E. J. Kightlinger. Rig Builders—Jas. B. Reeves and Smith Hufford.

The South Penn Oil Company.

The Washington oil field is well represented by employes of the South Penn Oil company, that holds large interests in the territory. C. E. Perkins is superintendent. Mr. Perkins was born at Pithole, Venango county, and in telling the story, said that the first thing that he remembers seeing was an oil derrick. Commencing at the lower rung of the ladder at Rixford, McKean county, he took a full course, which includes from roustabouting to office work. Working his way down to Butler county, where he arrived in 1890, he took a position with the Forest Oil company. Later he took charge of the S. P. O. Co.'s interests in Butler county, to be transferred to Washington, Pa., following the death of their former superintendent, Mr. A. L. Eakin.

While on a trip over the field a number of the company's employes were met as follows: J. C. Clicquennoi, farm boss for the company for the past 28 years. Mr. Clicquennoi is a New Yorker by birth, and started in the oil business in McKean county, migrating to Washington county in the year 1888. H. A. Holmes, O. M. Miller, D. M. Mosier, J. F. Harshman, J. L. Dickens, the latter serving 12 years with the Forest and 13 years with the S. P. O. Co.; T. S. Skinner, 15 years in the field, (one with the South Penn); C. W. Eakin, driller, 13 years with the company; J. M. Amos, 26 years; H. S. Price, M. M. Dalton, C. R. Stiner, F. C. McElwaine, J. M. Gray, William Stuck, F. J. Ward, J. M. Manville, Ed. McClelland, W. P. Brumlee, Andrew Stuck, Robert Mounts, John O. Reeves, Cyrus Dunn, D. W. Seybert, Ed. Clicquennoi, C. W. Hepler, W. E. Leonard, Marques Swiger and William Lyle.

Southwest Pa. Pipe Line.

F. McCue, with the company 34 years as district foreman, was at Bradford during the early excitement; hit Cherry Grove when 646 came in; went from there to Butler county and on to Washington, Pa., as district foreman. Frank Walker, with name down on the pioneer pipe line list, is connection foreman for the company.

Willetts Oil Company.

The Willetts Oil company forms a link in the chain of companies operating in the Washington field, with C. I. Nichols as superintendent. They have 144 pumping wells. Mr. Nichols came from Sweden when a young man. In 1883, he took oil field work at Bradford, to follow on down the line, arriving at Taylorstown a year later. His long service with the Willetts company tells its own story. Adolph Nichols, who has been on the company's pay roll for the past 20 years, was promoted to field boss three years ago. J. D. Ashmore has been with the company 13 years, Walter R. Smith 11 years, and P. L. Bedillion 4 years.

Washington Oil Company.

Eight miles west of Washington, the Washington Oil and Gas company gained control of a large tract of territory, but not before they satisfied a large number of mortgage claims. That they played a square game with owners is told in the following:

"With the coming of the Washington Oil company into the field, they learned that there was scarcely a landholder in the district but what was financially involved. Whether it was through bad management or poor crops that caused this state of affairs, we are not prepared to say, but such was the case and in order to secure a lease on the different farms that would stand a law test, the company took up the mortgages, applying the landholder's royalty to the aforesaid debt. As only one well had been completed in the territory at the time of securing the mortgages, a risk was involved by so doing. It has become common knowledge that the farmers, at the present time, are free from debt, educate their children, own automobiles, etc."

In the company's office, Taylorstown district, G. C. Jolly holds down the superintendent's chair. Mr. Jolly is a native of Clarion county, which goes without saying that he graduated from a petroleum college. Jolly has rung up his twenty-fifth year with the company. C. E. Turner has served 8 years in the company's machine shop, not as an apprentice, for Turner is a past grand machinist. He hails from West Virginia. A. L. Grimes has been repairing boilers for the Washington Oil company for the past 16 years. Promoted to foreman of the boiler shop a few years ago, for being the man for the position. Harrison Ward, of Olean, N. Y., has been on the company's pay roll for the past 26 years. George Stine, of Millerstown, Pa., 13 years; W. P. Kirley, pumper, 15 years; M. V. Hay, pumper, 10 years; H. E. Miller, driller, 27 years. J. K. Mounts, who worked in the West Virginia fields for a number of years, has held the position of foreman for the Taylorstown Gas company since 1889. A. B. Caldwell has been with the company 27 years. C. C. Mounts, field foreman for the Washington Oil company, 16 years. R. M. Cassell, field call man, wears a veteran's badge. J. A. Patterson, E. L. Mitchell, Martin Mitchell and F. G. Dutton are the company's pumpers.

J. B. Durkin is one of the Southwest Pipe Line boys. Charlie Dalton was born at Riglesville, N. J., his father being one of the early day operators on Oil Creek. He has been with the S. P. O. Co. for the past 18 years. John Rankin, a resident of Taylorstown, is one of the old guards, has a long record in the petroleum game and being an observant man with a good memory, his stories of the field are both interesting and amusing. The readers of this magazine will hear from him later as we have laid by some good yarns for publication. When in Taylorstown, don't fail to call on him. You will be made thrice welcome. W. G. Dickey, field worker for 12 years, is foreman for the Taylorstown Gas company. A live wire in the Washington field is Ed. Tag, contractor and producer. Ed., when not on duty, which seldom occurs, can be found at the drillers' hangout—the Oil Well Supply, recounting stories of days past and gone. In the oil game, Ed. is up to the minute and making good. J. W. McMurray has been 27 years with the Washington Oil company.

Canonsburg.

As an oil producing section of Washington county, the Canonsburg field is fast passing into history. Where once the elevation, that overlooked the town proper, was thickly studded with oil derricks and scores of men were busily engaged in building rigs, drilling, pumping, teaming and taking care of the surplus oil, but little remains excepting a few stripper wells, a small gasoline plant and scattered field debris, to remind one that but a few years ago it was a zone of excitement. Like the human race, big oil strikes come and go and many go too soon, from a financial standpoint, for the majority of those interested.

The Manufacturers Light & Heat Co. have an office in Canonsburg, and where also resides the general superintendent, J. J. Foley, who worked on the first pipe line laid from Bradford to New York City. Mr. Foley, who has been with the company for the past 30 years, and in all probability it is safe to say there are none better schooled in this branch of oil and gas business.

SOUTHWEST PENNSYLVANIA PIPE LINES—EWING STATION.
Standing—Left to Right: M. Lytle, E. A. Langenbacher, J. A. Holmes, J. W. Watson, Homer Neely, W. A. Walters, D. L. Jolly.
Sitting: Frank Walker, F. M. McCue, C. J. Walters, T. P. Dunn, C. W. Arnold.

The company's field foreman, Mr. Henry Cummings, of Bradford county, arrived at McDonald, Pa., with the opening of that famous pool, accepting a position with the Wheeling Natural Gas Co. With the taking over of the company's interests by the Manufacturers Light & Heat Co., Mr. Cummings was included in the deal and given his present position. The office force

consists of L. P. Cook, clerk; J. E. Reagan, bookkeeper, and J. B. Black, agent. The lone pumper found in the town lot excitement district was A. Fullick, formerly of Parkers Landing, who has charge of the gasoline plant, pumping a couple of wells as a side line. Mr. Fullick is well known throughout the Pennsylvania oil fields.

Meadow Lands.

At Ewing Station, Southwest Pipe Line Co., F. McCue, Frank Walker, W. J. Golden, C. J. Walters, T. P. Dunn, C. W. Arnold, M. Lytle, E. Langenbacher, J. A. Holmes, J. W. Watson, Homer Neely, W. A. Walters and D. L. Jolly were found on duty. The company has a finely equipped pumping plant, around which the grass is kept green (in the summer time).

Still Others.

Washington, Pa., in a sense, is the oil man's home. We doubt if there is another oil center in the state that can register as many of the older field workers, operators, and producers, not a few having retired from active duty. Among the white-locks, mention is made of William G. Gibson, who has filled every field position from carrying water up to the last plane. Commencing to build rigs at Parkers Landing, back in the early 70's, he came to Washington county with the first excitement, has weathered many a financial storm successfully.

It can be said of C. C. Chamberlain that but few men put up a better fight to win in the days when producing oil was but a speck on the commercial map. Born at Litchfield Center, Ohio, he found his way to Pioneer in 1866. Securing work at hauling oil from the Maple Shade well to the boat landing, he kept on the watch for a more remunerative position.

It was while helping to grade the ground for a derrick that he met and became acquainted with the Hon. Lewis Emery, who shortly after started young Chamberlain and James McElhiney in the contracting business, drilling eight wells for Mr. Emery at Shamburg. Mr. Chamberlain followed contracting and wild-catting through Clarion and Butler counties and was among the first contractors to enter the Washington county field, and held first place among these. He afterward followed fishing for lost tools and pulling casing, etc., at which he was most successful, having in his possession at the present time the most complete line of fishing tools owned by a private individual in the country.

For many years Mr. Chamberlain was interested in the Parkersburg Rig & Reel Co. With the severing of his connection with the company he became interested in the manufacturing of oil field supplies at Scottdale, Pa. of which concern he is the leading spirit.

What about Patrick York? More than we have space for, therefore will touch but lightly. Patrick came to the states from Canada, arriving in the upper oil zone in the year 1870, drifting with the tide of development to finally locate permanently at Washington, Pa. Mr. York, with his advent into the Washington field, drilled for the

“NATIONAL” PROG

From the Candle to the Electric Light

NEARLY 90% AND

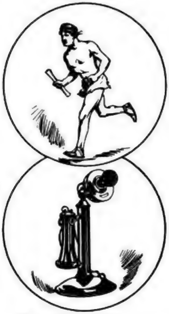
¶ Progress is the order of the day—in the production of Pipe as well as in everything else. It is impossible to stand still; you must either go ahead or fall behind.

¶ Take, as an example, Steel Pipe which was first made in 1887; the tonnage of about 300 tons was practically negligible.

¶ Today, however, Steel Pipe represents almost 90% of the total tonnage of screw-joint pipe made in this country—and the general trend is upward.

¶ While the tonnage shown is not all “NATIONAL” Pipe, yet a substantial proportion of the whole is “NATIONAL”. The first Steel Pipe was made at Riverside Iron Works (now Riverside Works, National Tube Company). National Tube Company has been, and still is, the leading factor in the development and production of Steel Pipe.

¶ Progress is indeed the order of the day, and the progress made in the production of Steel Pipe—“NATIONAL” Pipe—is leading the procession.

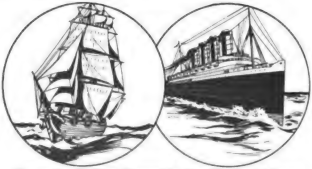


From the Old Roman Messenger to the Telephone

NATIONAL TUBE COMPANY

GENERAL SALES OFFICES: FRICK BLDG.

Pittsburgh, Pa.



From the Sailing Vessel to the Modern Liner

STEEL FOR SERVICE

RESS PIPE

STILL GOING UP

¶ The following figures are taken from the Special Statistical Bulletin No. 3 (1916) of the American Iron and Steel Institute, issued on June 30th. Read them carefully; they are eye-openers to the progress of Steel Pipe.

PRODUCTION OF IRON AND STEEL SKELP IN THE UNITED STATES FROM 1905-1915, GROSS TONS

Year	Iron	Steel	Total	Iron	Steel
1905	452,797	983,198	1,435,995	31.5	68.5
1906	391,517	1,137,068	1,528,585	25.7	74.3
1907	444,536	1,358,091	1,802,627	24.6	75.4
1908	297,049	853,534	1,150,583	25.8	74.2
1909	370,151	1,663,230	2,033,381	18.2	81.8
1910	350,578	1,477,616	1,828,194	19.2	80.8
1911	322,397	1,658,276	1,980,673	16.3	83.7
1912	327,012	2,119,804	2,446,816	13.3	86.7
1913	312,746	2,189,218	2,501,964	12.5	87.5
1914	264,340	1,718,091	1,982,431	13.3	86.7
1915	262,198	2,037,266	2,299,464	11.4	88.6

¶ THEREFORE, it seems evident, from these figures, that Steel Pipe—"NATIONAL" Pipe—can legitimately lay claim to the title "THE MODERN PIPE", for it is distinctively a PRODUCT OF PROGRESS.

¶ "THE RISE OF STEEL PIPE"—send for a copy of "NATIONAL" Bulletin No. 24 if you are interested.

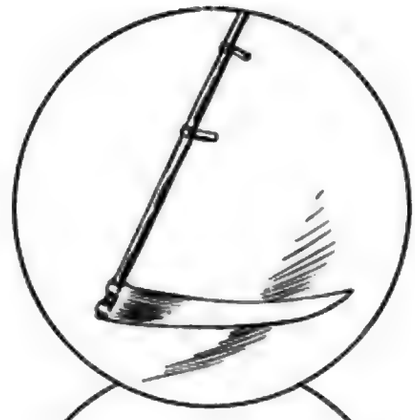
It pays to be NATIONAL Prepared

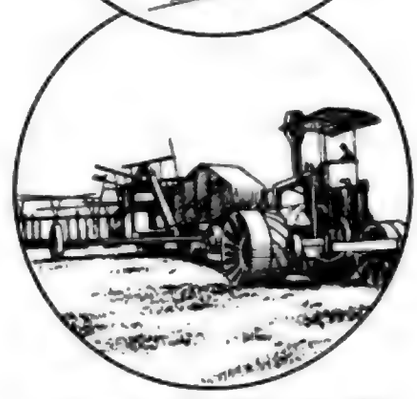
DISTRICT SALES OFFICES:

Atlanta Boston Chicago Denver Kansas City
New Orleans New York Omaha Philadelphia
Pittsburgh St. Louis St. Paul Salt Lake City

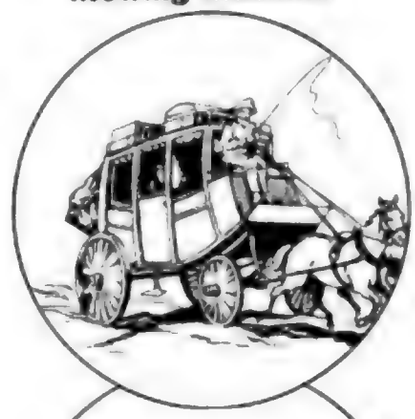
Pacific Coast Representatives:
U. S. STEEL PRODUCTS CO.,
San Francisco Los Angeles Portland Seattle

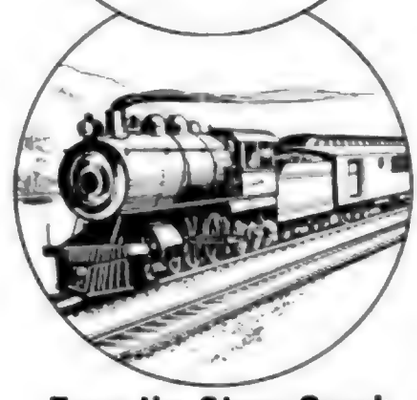
Export Representatives:
U. S. STEEL PRODUCTS CO., New York City.





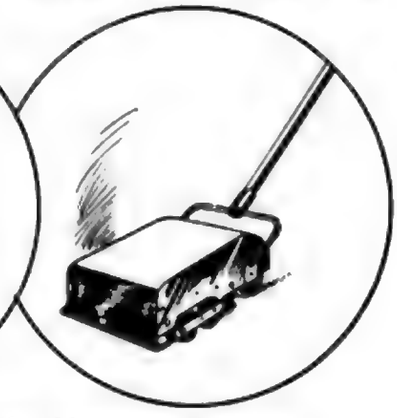
From the Scythe to the Mowing Machine





From the Stage Coach to the Modern Limited

STEEL FOR SERVICE



From the Broom to the Vacuum Cleaner

South Penn Oil company 21 years and was considered a careful man in his line. To his credit, it can be said that the proof is still in evidence that he was the individual that made the discovery that it did not require the turning of the cable to drill a circular hole. This he demonstrated while drilling on a well one cold winter day in the Bradford field. A number of good stories are laid at his door, showing he had a fair allowance of Irish wit. In a suit with the S. P. O. Co. over a string of casing, the opposing lawyer, in his cross examination, said: "And so, Mr. York, you say that you put all the casing in the well from the top?" "I certainly did, there being no side entrance," was the answer. Mr. York is also the inventor of a steel derrick that has given satisfaction wherever used.

W. C. Hart, born in Armstrong county, has followed drilling for the past 30 years. S. H. Price, born in Crawford county, entered the field at Pioneer, drifting to Franklin, Pa., where he drilled on Point Hill, and in other Venango county fields, taking in Bradford on the swing, to wind up his globe trotting at Washington, Pa., where he owns production and where he has been identified with the South Penn for the past 25 years.

While in the field, a visit was paid the South Penn's electric pumping plant on the A. J. Ernest farm, F. P. Criswell, engineer. The plant furnishes electricity for pumping a number of wells scattered over wide territory and has been giving splendid satisfaction so far. Mr. Criswell has been with the company for the past 17 years.

Among the other good men and true met in the Washington field were J. L. Bryner, driller; H. S. Curry, toolie; James Caffrey, a son of old Ireland who came to America 40 years ago and who has been identified with the Willetts Oil company for 20 years; Thomas R. Hart, with 30 years' experience in oil field work, who is both an operator and producer; D. K. Maitland, of Venango county. Moved to Petrolia with his parents when 10 years of age, has followed the fortunes of the oil field from his eighteenth summer and has figured in every oil strike from Bradford to the southwest. Now with the Arco Oil Co. Mr. Maitland opened the Wooster, Ohio, field and also the Dan's Station field, Washington county. G. L. Locy has rounded out a quarter of a century in Washington county. Ed. A. Conroy, born in New York, took his first lesson at Mt. Hope, Venango county. In telling the story, Conroy states that he hired out to dress tools for a contractor by the name of Martin. One tour seemingly satisfied Mr. Martin as to his ability as a toolie, for he paid him off. Twenty years after he had now become a full fledged driller, he met Mr. Martin in the Washington field and was employed by the latter as a driller. G. M. Cameron derives a royalty from valuable producing territory east of the town.

One of the highly respected men of Washington is J. V. McCausland, whose long years spent in the oil fields prefixes to his name the word veteran. With memory clinging to

the early oil development of the country in which he played a part, he is one of the few left of the old guard that changed tour at midnight on the Allegheny hills. Although requested to retire from active duty with a remuneration by the McKeown Oil Co., he works his 12 hour turn pumping. Mr. McCausland is a man with whom it is a pleasure to meet and converse.

An Amusing Incident.

It was during the early excitement that some one had informed a farmer, on whose land a company was drilling a test, that the crew could bring in any kind of a producer desired. In other words, it was up to the drillers whether a well was destined to be wet or dry. Believing this to be true, the farmer went to the well and asked if this was a fact.

On being informed such was the case, the farmer told the crew that if they brought him in a good well he would give each of the drillers a gold watch and the tool dressers a suit of clothes.

The crew promised to do this providing that he was to keep the matter a secret, that if he did not there was likelihood of it dispelling the charm.

This the farmer promised to do and went away highly elated over the outlook. When completed, the well made 2,000 barrels a day and the farmer made his promise good. It was not long after this that a well was begun on a neighbor's farm, a man with whom he was on friendly terms, and he longed to tell him of the power controlled by the drillers to bring in good wells. Finally he decided to do so. His neighbor, a German by descent, when told of the matter, said: "Is dot so, mine friend. I goes right aval und gits me a good vell too."

Upon the crew furnishing the information that it was up to him whether he got a well or not, he said: "Poys, if you bring me in a vell like mine neighbor Smith has, I gives you all gold vatches."

Telling him to go home and rest easy and not tell a soul, the German did so and waited patiently for the end of the story.

The roads were in bad condition and supplies hard to get into the field. The well on the German's farm was fast nearing completion. As no preparation had been made to take care of the oil, if any should be gotten, the boys, on tapping the sand at the midnight hour, stopped drilling. It was not long before gas was noticed coming out of the hole, which gradually increased in volume. To cut the story short, the well drilled itself in and a very deluge of oil rushed down the slope to a small rivulet, which wound its way through a pasture and by the Dutchman's barn. At an early morning hour, a son of the German led the farm team down to the run, but the animals refused to drink, when the lad made the discovery that the run, swelled to three times its former size, was caused by escaping oil. Hastening to the house he informed his father of the matter, who, not waiting for his hat, double quicked over a hill to where was located the well. He found the crew seated on some planks a few

rods from the derrick that was dripping with the fluid, the oil impelled by strong gas pressure, spurting half way up the derrick.

Passing the crew and running up near the derrick, he stopped for a moment to gaze on the gusher, then came back to where the crew was sitting, saying: "Stop her, I say! Why you run all mine oil avay? Stop her, I say!"

"We can't do it," was the reply of one of the drillers.

"Vat; can't stop her when you started her? Stop her, I say, or you don't git any gold vatch."

The story runs that the boys failed to be recompensed by the German for striking the gusher.

B. D. Northrup.

Mr. Northrup is of the ninth generation of the Northrup family tree. History tells that 95 of his ancestors fought for American independence. When 8 years of age, his parents removed from New York state to Petroleum Center. When 15 years of age he pumped wells on the John Benninghoof farm. Of a mechanical turn of mind, he entered the employ of J. H. Luther, one of the expert machinists of that day. Completing his trade, he went to Bullion, Venango county, to follow the exodus of the oil men from that field to Bradford, where he worked at his trade until the shut-down movement, when he went to Washington and went into business for himself. His shop equipment at that time consisted of one drill press and one lathe. Shortly after this he perfected and placed on the market his noted steam gas regulator, which met with wonderful success.

Coming down to the present time, no vestige of his little shop of that day is visible. On the site of where it stood stands a large and substantial brick structure with additions lately added in order to furnish the room in which to manufacture a line demanded by his customers. In connection with the machine department, modern in equipment, is a foundry where heavy and light castings are made, both in brass and metal. To sum up, the B. D. Northrup shops are favorably known throughout the oil regions and there has never been any trouble between him and his force of workmen.

O'Brien Boiler Shop.

The O'Brien Boiler establishment is another of Washington's industries that has filled a needed link in the chain of its manufacturing enterprises. In connection with turning out new boilers, repairing old ones, and building iron tanks, a specialty is made of steel derricks.

Zahniser Bros.

A concern that has grown up with the oil development of Washington county is the Zahniser and Sten Machine company. The company is principally engaged in the manufacturing of oil well supplies and enjoys the patronage of the oil producers in general.

THE WALKING BEAM.

(By Sandy)

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Many of our readers have, no doubt, bin wonderin' why their Walkin' Beam was a couple of days late in arrivin' and as we don't believe in keepin' things hid, will announce that we were held up on account of the high cost of paper to print it on. Dear knows if it would have bin printed yet if Joe Peters hadent laid in a bigger supply of plain writin' tablets that he couldent dispose of a couple of years ago, which we bought off him. Several times in the past we've said sum sarcastic things about Joe, but frum this on we have agreed to not only put Joe's name on our subscription list at reduced rates, but will divide our patronage betwixed him an' Cy Jones, both havin' said they'd wait on us fur a spell. Not only has the high cost of paper made inrodes on our scant supply of money, but it has come to pass that eatables an' bodily apparel has so riz in price that, as Bill Swires saz, livin' will soon become a luxury that only the rich can indulge in. Tother evenin' Simeon Grimes, whose runnin' fur sum state office held a meetin' in the town hall an' as we received a special invitation to be present we went, as we'd bin informed that Simeon was goin' to reconstruct the whole political machine, as he termed it, if elected, an' reduce the high cost of gittin' somethin' to eat an' wear. As most of us was mighty anxious to know which side of the political fence 'twas best fur us to stay on, the hall was filled to standin' room when Simeon arrived and took his place on a platform. He looked as spick an' span as a retired bank cashier in a swaller tailed coat with a watch chain stretched across his velvet vest an' he nodded this way an' that to us seated on benches an' store boxes, waitin' fur him to tell us how to circumvent the fellers who was causin' us to pay seven times as much as a thing wus worth in order to be amongst the livin'.

Friends and feller citizens, sez Simeon, at no time since Columbus anchord his frail bark on America's rockbound shores has there bin a time when men whoes hearts bleed fur the woes of mankind need to be 'lected to office. Feller citizens, sez he, it has cum to my ears that men, women and children, with hands raised toward heaven, are cryin' an' prayin', that men who can't be bought by them who have purchased all available human eatables, be elected as law makers. Yes sir, friends and feller citizens, frum the topmost hills of Vermont, the oil soaked plaines of Oklahoma and frum the blizzard swept lowlands of New Mexico, human mortals are turning to us common people for succor. They are looking for a Moses to lead them out of the land of bondage, so to speak. Why do we have to pay such disastrious

prices fur eatables an' wearables, let me ask. Simply because we can't help ourselves. I want to illustrate like this. I live, as some of you know, at the county seat of Posey county. I run a little store and have a farm ten miles out. Last week my man brought me in ten dozen eggs that I sold fur fifty cents per dozen and no questions asked if they were fresh or not. Now them eggs werent worth no fifty cents, but whoes to blame. It werent them hens by a dadburned site, it were them fellers that cum around here last June an' bought up eggs in Posey county and packed them in ice till they werent enough goshhanged eggs left to make a dish of friend cakes. Its been the same with our hogs an' our cattle an' our everything that grows outn the ground and walks on two and four legs that is nourishing to the human body. Them moneyed sharks come amongst us and palaver us inter disposin' of our human food stuff, till we havent got enough to eat ourselves, then sell it back to us seven times higher than they paid.

Are we to blame? I ask. No, not by a dummed site we aint, fur how did we know they'd did the same thing other places and how did we know, they were going to hold our eggs an' our other things until we hadent any an' make us come across. My very blood boiles with indignation at the very thought of how us honest farmers an' store keepers have bin robbed these latter days. Vote fur Simeon Grimes, the peoples choice as a law maker and we'll have eggs an' other eatables the year round. Why am I gitten fifty cents fur eggs when they aint worth half of it? let me ask. It's because there scarce an' I can git it. Who made them scarse? I ask agin. It's them fellers that I've been tellin' you about.

My opponents will tell you that to vote fur them means a commission will be 'pointed to investigate the high price of human food stuff. Times without number commissions have bin 'pointed for this very purpose at tax payers expence and what follered? let me ask. Did human food stuff git cheaper? Not by a dadburned site. We not only had to pay fur the expence of the commission, which included sum unnecessary money, but to the trouble they put them cold storage fellers to in the bargin. Elect Simeon Grimes, the peoples choice as your law maker an' I'll pass a law that will put a stop to hoardin' up eatibles 'till only fellers with gobs of money can eat 3 meals per day. Again I ask you to vote fur Simeon Grimes the peoples choice. I leave my election in your hands."

Picked Up On the Sidewalk.

The heavy fall of snow that took place yesterday has covered a multitude of unsightly places on our streets.

Potatoes, encased in red tissue paper, are sellin' three fur 10 cents at Joe Peters.

Melda Hobbs, who has bin visitin' at the county seat fur the past week is still there yet.

Sol Skinner, our town constable and detective, is not so well as he was last week owin' to ketchin' cold by fallin' into Crab Creek while

huntin' muskrats. Sol sez if he'd ketched a muskrat with the cold he wouldent cared as much as he does.

Eph Hammerstein, our weather prophet and bee apeary, failed to send in his weather report in time fur publication. Eph oughter be more punctual as its going to work sum hardship on them of us who are plannin' work ahead.

The recent advance in crude petroleum has stimulated activity in every branch of the oil industry in this section of Posey county. Although the territory is pretty well picked up there is still a few good bargins to be had at bonesses, so we have bin informed. The last issue of the Briarville Breeze made a scurrilous attack on our oil field, an' stated that we were responcible fur gitten foreign capital to come an' lose money, when we node there wasent a well in the territory makin' a barrel a month. We here demand that the Breeze take this back as we have positive proof that the Crab Creek Oil Co. have been gittin' that much themselves. This attact on us plainly shows that the editor of the Breeze is gitten mighty hard up fur news, which he always is, to stoop to such triflin' matters. If he continues to attact us anymore we'll cut him off our exchange list an' would have ere this if it werent fur the few items of interest we git out of the Breeze.

I have bin here four days tomorrow an' it don't seem no time since I came on account of so much to see an' talk about. I had bin told this was a turrible wicked place to live in, that a feller wasn't even safe in the town's lockup where they put fellers in overnight who don't know enough to behave when drunk. I must say this, the town, fur bigness an' fur business frum sellin' oil well supplies down to runnin' an auction house where they shine up a brass watch an' sell it fur gold plated, beats all the towns in Posey county put together. I expected to see men goin' round with pistols an' guns strapped to their waist bands, an' cow boys with ropes tied to their saddles an' drinkin' saloons wide open, but sich is not the case. Instead of guns the men carry monkey wrenches and are peaceful like as the crowd that gathers in Cy Jones grocery after supper. Instead of the drinking saloons being wide open they are closed up tight in front an' you even have to be well acquainted to git in at the rear door. Drumright is surrounded by oil derricks an' iron tanks big as Al. Ketchem's bank barn an' every fellow is real busy who works. It wouldent sprize me a bit if they wouldent be gittin' oil here fur some time to come as I was told there was several places around in the neighborhood they hadent dug wells on yet. Somehow it don't seem to make any difference where you dig a hole out here if you dig deep enough you strike oil if there is any to strike. One feller told me confidentially that he knew where me an' him could strike a big well if I'de put up the money. I've been thinkin' it over and will if I have the money which is not likely. The oil sand don't run in streaks like in the Posey county field, but spreads out like I've seen a patch of Canada thistles in a pasture lot.

There's a heap of fellers here frum back in Posey county an' other parts. You run agin' them here in town and elsewhere. Sum are makin' money an' savin' it while sum havent a dadburn cent to their names. I kin get every one of the last fellers to take the Walking Beam on trial for a spell. In fact it is my belief that if I staid here long enough I'de git ten or a dozen subscribers, one feller who owns sum wells on Tiger creek sayin' if there was less readin' in it he'd like it better.

Tother evening I took a stroll up Tiger creek to see sum oil fellers and seein' a shack where people was goin' in an' comin' out of quite regular, I thought perhaps some oil feller had hurt hisself and went in to see. What I seen was a red faced chap with sleeves rolled up standing back of a bench on which was a wash biler full of dirty lookin' water an' heated by gas. We said hello to each other when I axed if he was takin' in washing. "Nope" sez he. "I'm runnin' an Oklahoma Brewery," sez he, "and if you want to replace that ten cent pin in your necktie for a genuine dimond, you can do it by taking over my right, title and interest in the brewery fur the sum of ten dollars an' I'll throw in my good will and trade, sez he. Let's go and have a look at the brewery, sez I. There it be, sez he, pointing a finger at the biler, and you might travel all over the ile country and not find as good a one. Man, sez he, thats a genuine copper bottomed biler, and has bathed more kids an' washed more clothes than you could shake a stick at, sez he. Chock beer made in that biler goes further and lasts longer an' causes a hankering for more than any I knows of in the Cushing field, sez he. I'm considerin' about it as he promised to take part in a subscription to the Walking Beam. A little further on I spied a bow-legged feller with a pair of tongs shamblin' along an' was actually 'sprized when he come closer to recognize him to be Mose Diggs of lower Posey county, Ingeanner. When we had shook hands an' he'd taken a fresh chew of Honest Scrap, I axed him how he was comin' on and if his family were well, specially his wife having node here when a girl.

"Gitten along quite tollerbel with my work, Uncle Bill, but me an' the old woman hasent hitched up right somehow. It's like this. My pap was a preacher of the gospel and a great feller on scripture pints, 'specially where females were concerned. He 'lowed women were brought inter this world to keep silent when at church an' their place was stayin' at home an' raisin' families. Natterly, I fell in with my pap's ideas and when me an' Polly Ann Hicks got married, I laid down a few rules fur her to follow, as pap said, sum wholesum scripture advice. But Polly Ann dident take to my rulin' as I expected and give me to understand that if I thought that a woman's chief end was to raise kids and fry sausage, there'd be suthin' doin' not down in the cattekism. Actually, Uncle Bill, she's got the notion that she oughter have the same right to attend picture shows at Drumright as me an' says I have as much moral

an' religious right to stay at home evenings an' take care of the kids as her. Blamed if she dident git on a tantrum tother morning coz I wouldent let her have fifty cents because she wouldent tell me what she wanted it fur. Uncle Bill, I wish you'd write up suthin' about how to manage a wife and print it the next issue of the Walking Beam fur her to read, coz if suthin' isent done afore long I'm afeard she's goin' to git the best of me. So I writ the follerin':

How to Manage Your Wife.

Dear Mose, you are anxiously longin' to know,
How to make a success of your life;
And one of the things you would like me to show,
Is how to manage your wife.
Well, the very first rule on the list to observe,
All women with pleasure it fills;
Is for you to be free with your old pocket book,
And always to pay up the bills.

The next is when she has finished her work,
Dead weary and fretting and sore,
Don't sit around with a scowl on your face,
and scold her for not doing more.
Don't chide her for halting awhile in the race,
That you may be making for gain,
For you'll put the coin in the bank, that you make,
While she takes the worry and pain.

And when you go out for a lark with the boys,
Don't add to insult, the offense;
Of counting in dollars the money you need,
While she must put up with the cents.
Now you take a tip from your "Uncle," old boy,
And when you go out for a time,
Just give her the tens and the twenties you have,
And then blow yourself for a dime.

Don't turn up your nose if she wants to be nice,
As in days of your first courting bliss,
And when the poor soul craves the kindness of love,
Don't refuse to caress her and kiss.
And then, when some "blond" saunters by on the street,
With her bosom exposed to keep cool,
Don't prance around with a leer in your eye,
And act like a natural born fool.

Don't you loaf around on the streets after dark,
Conversing with those who are rank,
And then stagger home about fifteen o'clock,
With a gallon of booze in your tank.
And when the cold winds of winter does blow,
And you're out of a job at the mills,
Don't take the wash money she makes at the tub,
To pay up your old whiskey bills.

Dear sir, if you want to be honest and true,
And do just the things that are right,
Live up to the truth in each act that you do,
And always stand out in the light.
Then when the death angel shall summon you home,
To give an account of your life,
You will have the best place in the realms of love,
If you have been true to your wife.

ROUMANIAN OIL WELLS WERE DESTROYED BY RETREATING ARMY.

According to all reports, the oil wells of Roumania were destroyed before the Germans entered the field, dynamite having been used to put the wells out of business in order that the invading forces might not reap the benefits of having at hand a supply of petroleum, which is playing such a big part in the war. To re-open the fields, new wells will have to be drilled and this work will require a lot of time. It is perhaps true also that it will be years before the Bucharest fields will be producing as much oil as before the wells were destroyed.

BEN HOGAN

.... OR ....

"The Wickedest Man in all the World"

By William S. Bredin.

THE particular party of oil men hailing from the Pennsylvania fields, with whom this tale of a self-proclaimed bad man of the early days of the region is concerned, were traveling east one night in the thankful November of '16. It was a small, select and joyful company, with but a single exception to joyfulness. It is not necessary to furnish scandalizing particulars such as names, ages, Bertillion measurements or other identifying characteristics for the benefit of the curious or the police, as to who they were; quite sufficient is it to say that they were a genial, merry crowd, well equipped with funds, and oversupplied with a desire to separate themselves, in a decent and orderly manner, from their wealth. This abundance, by the way, was "easy money." It did not represent any hoarded oil-balances, turned into cash the day following the unexpected and spectacular rise in the price of oil—an agreeable experience which lucky operators sometimes enjoy. It was money won, rather than money obtained by toil or adventure. Each man of the company had wagered as he voted in the preceding presidential election; the wagers had been paid—hence the trip eastward to the city by the sea, with its commercialized gardens of delight, its music, its ladies gay, and the flowing wine which is always looked upon when it is red.

Very naturally, the conversation in the smoking room of the Pullman car turned on easy money and the easy manner in which it is usually dispensed. The particular member of the party who was identified by the description "The Widow's Son" monopolized the latter subject. He was a privileged member of the company, so to speak, as it was generally understood that he was good to his mother; she being a widow, his title fitted him very well, indeed. He, therefore, assumed he had the floor when conversation began and, right or wrong, did the talking.

The Widow's Son declared that he had known all the great spenders of the oil country from "Coal Oil Johnnie" down to the lightest imitator of the great original. To him the spenders were psychologically much more interesting than the "tight wads." The latter, he said, were usually a dirty, malodorous and stupid lot of people, totally de-

void of attractions or excuses for existence. The money of the "tight wads" was merely saved and hoarded for some unborn sport, he maintained. The spender, on the other hand, he declared, was in many respects a public beneficiary—he kept things going; he circulated money; he added to the communal gayeties; and, hence, was justified as a human factor.

"There is, however, something mysterious about the spenders," continued the Widow's Son. "As a matter of bookkeeping, pure and simple, the balance could not be readily struck between the slow flow of income and the rapidity of the expenditures. In other words, there was no intelligent way of accounting for the quick and easy exhaustion of the assets of the ordinary spender."

To emphasize this assertion and argument, the Widow's Son alluded to the career of Ben Hogan, probably the most mysterious, the most curious, and the most perplexing personality ever identified with the history of the oil country, its opulence and its stringencies.

"From what I can learn about Ben Hogan," said the Widow's Son, "it is safe to say that no man of his time, whether operator or speculator, ever handled such immense amounts of cash. Hogan fairly floated in a sea of gold. He swam in champagne, he luxuriated in plenty; nevertheless, when he finally disappeared from the regions it was reported and generally believed that he was 'dead broke.' Now, what I would like to know, is what in the deuce became of that money?"

Another member of the party, who was nicknamed "The Money Seller" because he was one of the regional bankers, became tired, about this time, of the conversation and, to relieve himself, picked up a newspaper which was lying on the seat of an unoccupied chair opposite him. Evidently some previous visitor to the room had mislaid this paper. The Money Seller scanned the sheet cursorily for a while. Suddenly his attention was concentrated on something he saw in it. For a moment he read silently; then, in a startled voice, he exclaimed: "Here's something strange! The sunset and the evening star have appeared once more; the call has again been sounded! Hogan—Ben Hogan, the Bold, Bad Man, of whom we have been talking, is dead! There will be slight mourning at the bar for him, I imagine." Having so delieverd his unexpected message, the Money Seller read aloud the following announcement:

"DEATH OF BEN HOGAN

"Passes Away in Chicago at a Ripe Age—Career Half Bad, Half Good.

"Ben Hogan, founder of 'Hogan's Flop,' which for many years sheltered derelicts, hoboes and castaways, at two cents a bed, each—if they had it—died in his home in Chicago, Tuesday, November 1, 1916, at the age of eighty-seven. With the passing of the famous prize fighter, preacher, and humanitarian, was recalled the days when thousands of unfortunates were fed

and sheltered by the humane mission in Chicago which, friends say, he always operated at a financial loss.

" 'Moody, the noted evangelist, taught me to preach,' Hogan said, 'and then I learned that there was more in serving mankind than by giving hungry men words. That is the reason I started the soup kitchen and the Flop.'

Hogan served both the Union and the Confederate armies in the Civil War as a blockade runner. Nearly half a century ago he fought Tom Allen for the world's championship and was beaten."

The reading of this quaint memorializing description of the one-time bold buccaneer, prize fighter, dive keeper, and clergyman, was followed by a moment of tense silence. This silence was broken by the advent of a stranger, who flung the curtain in the door aside and entered the room in a somewhat ghostly way.

"Pardon me, gentlemen, for interrupting you," said the stranger. "I left a newspaper here a few minutes ago. It's of no value to anyone but myself. It contains a slight account of the demise of a man who gave me my first job when I was a very young boy. If I can find that paper, I intend to file it away among my other literary curiosities. The man whose recent death is recorded in the paper was a noted man in many ways—a misunderstood man, I always maintained—and an historical character in the rude, coarse and brutal part of the life of the oil country."

"Your paper, sir," said the Money Seller, handing it to him. The stranger folded the paper carefully and placed it in his inside coat pocket.

"Excuse me, sir," exclaimed the Widow's Son, "I presume that I am not in error in assuming that you are alluding to Ben Hogan?"

"Exactly," rejoined the stranger, sententiously.

"You knew him, then?" inquired the Widow's Son.

"As intimately as any one ever knew that mysterious and contradictory individual," replied the stranger. "As I said before, he gave me my first job, when I was a very young boy. He made me the leader of the orchestra which he maintained in his dance hall at Pithole, in the middle sixties. He paid me very well, and always treated me with the utmost consideration. This job enabled me to educate myself and I am now a graduated physician with a well paying practice. But for Ben Hogan, I might have yet been a toiler in the ditch all my life. I followed him from Pithole down to Oil City, where we parted. But I always kept in touch with him in a more or less close way. I know all about Hogan. He was a classic in the immoralities, but not a depraved man at heart."

"Sit down, sir, please," said the Widow's Son. "We are all from the oil country and just happened to be talking about Hogan. Your appearance, therefore, is a welcome one. Bold Ben preceded us by a generation or so, and what little we know about him is rather indefinite and not at all reliable or complimentary. Would you object to sup-

plying us with what might be termed the accuracies concerning him?"

"I will be most pleased to do so," said the physician, "If it does not tire you."

"It will decidedly interest us," rejoined the Money Seller, handing him a cigar. "So, go ahead and tell us what you know about him. He was a gambler, of course, I understand, and like all gamblers, a pest."

"Well," began the physician, "Hogan was a man apparently of two natures. There was something good about him, and something strangely bad—that is, if the word 'bad' can be differentiated from the idea of vileness, brutality, and innate wickedness. He was a curiosity all through—an enigma. In the first place his name was not Hogan. He himself informed me that his correct patronimic was Hagan, which is a German name. Why he assumed the Irish name of Hogan was always a mystery to me, for the man himself was almost devoid of humor, being a matter of fact, quiet and unassuming person. He was blunt, rather than verbose."

"Devoid of humor, you say?" inquired the Widow's Son. "That seems sort of contradictory to me, for I recollect reading somewhere or other that Hogan, when proprietor of the dive at Babylon in the Pithole district, was in the habit of burlesquing clergymen. He would dress himself up in ministerial garb white collar and all, and perform mock marriage ceremonies, joining together in the fragile bonds of such illegal unions the female inmates of his house and the infatuated gentlemen who happened to be patrons of the establishment for the time being. I am further informed that some of the brides and the bridegrooms took such marriages seriously and became good domestic upholders of the relation thus established. That always seemed to me to indicate that Hogan had some sense of humor."

"What you have related," rejoined the physician, "is an actual fact. Hogan did begin to play the clergyman at Babylon and ended up by becoming one at Chicago. There is something curious in the fact of this evolution. It seems like a fiction."

"What kind of a looking man was he?" inquired the Money Seller.

"He was about five feet, nine inches in height and magnificently built, exceedingly broad in the shoulders, long in the arms, and well placed upon his feet. He tapered from the neck to the feet, was quick in movement and graceful. He was the strongest man who ever appeared in the oil country. He could tie a rope of given thickness to his little finger and, extending his arm, lift up from the floor two big men, clinging to that rope. The face was strong in expression; his complexion was dark and swarthy."

"Oh," exclaimed the Money Seller, "I have heard lots of stories along the line of Hogan's physical prowess and also much about his qualities as a fighter. There was at that time, I am informed, a good lot of huskies in the oil regions, among whom I may mention Seth Mead, Charlie Tillinghast, Jim Crowthers, Tim Swaney, George

Coyle and Billie Boyle. These men were just as good as Hogan and just as strong—some of them fought and beat Hogan. Why then specialize the old dive keeper as an oil country celebrity? He wasn't even connected with the business at all. I feel like protesting against such an identification."

"Quite right you may be," replied the physician, "and yet Hogan was a real product of the oil country environment. He came to the regions immediately following the close of the civil war. He found certain conditions existing there which were not of his making. A necessity for relaxations and pleasure existed. Hogan simply fitted himself into the surroundings—he did not create them. He supplied what the spenders and the successful ones desired—wine, women and song. I'll admit that the business was immoral; that Hogan was the king of the illicit liquor traffic, the prince of white-slavers, a bold bad man in almost every way, but he was classic in his way. As far as my knowledge goes I never heard of him being accused of seeking a quarrel, brow-beating people like a town-bully, or otherwise disturbing the peace."

"Did he ever commit murder?" asked the Widow's Son.

"If he did I never heard of it; by association he may have. At Babylon, I recollect one of the brides flinging herself from a projecting ledge into the deep river below, where she met her death. Perhaps he may be blamed for that tragedy. At Parkers Landing, in the early seventies, I recall the dragging from the river of a young girl who had fled from Hogan's 'Palace of Pleasure' and leaped into the stream. Perhaps many such cases occurred, but it may be questioned if Hogan was the real cause. He was merely a servitor of the evil-practicing crowd, rather than the originator of the practices, which are as old as the world. There was a streak of humanity in the man, which manifested itself occasionally in a most striking way. At Petrolia where his mammoth dance hall was called 'Hogan's Female Seminary,' a farmer one day drove up to the door, accompanied by his daughter, a very attractive and innocent girl. This farmer asked Hogan if he would not undertake the personal care of his daughter's education. 'I won't quarrel with you, professor,' said the father, 'about the cost. Me and my wife believe in education. We've just struck ile over at our place, so dang the cost; if you will only take care of my daughter, I'll be mighty glad to leave her with you. She's got her grip in the wagon, with her prayer book and bible, and I guess she will be safe with you.'

"Hogan drove the man away, without undue violence or extraordinary profanity. No enticer was he, as far as I know. His impulse was good, I believe. He was not a man of any imaginative qualities. He did not possess the gift of expression, nor the grace of fine deliverance, so valued by the town-exploiting preachers of our present day. He was no Billy Sunday, and event the local barber evangelist could excel him in hysterical eloquence and picturesque denuncia-

tion. Well, to bring matters to a close, Hogan, little by little drifted out of my life. I heard of him at Elk and Turkey City, at Bullion, at Summit, and at Pittsburgh; in all of which places he was identified with the night life and the gayeties of individual indulgences. Imagine my surprise then, when one day over in Clarion county in the neighborhood of the burned towns of Elk and Turkey, I read an announcement that 'Ben Hogan, the Wickedest Man in the World' would conduct revival services at the chapel.

"I went to hear him, of course. As a speaker, he was uninteresting. The defects of his education, the lack of imagination, the want of a vocabulary were all painfully apparent when he essayed to speak. Moreover, the attitude of the people towards him was one of unfriendly suspicion . He was known to them as a gambler, a prize fighter, a dive keeper; consequently his reformation did not seem to be quite in keeping with his career. His trip was a failure. The only recollection which remains of it is the remark he made somewhere in the Butler county field—perhaps it was at Petrolia—to the effect that 'he had been over in Clarion county where he used to raise hell, but where they were raising potatoes now.' Perhaps, after all, Hogan had some sense of humor.

"I am afraid, gentlemen, it is getting late, and I am quite sure that you are tired. If I were to sum up Ben Hogan, as a feature of our oil country life, I would say that he is entitled to some consideration, some charity of thought, some liberality of judgment. He was strong on the initiative. I have always maintained that he was the originator, in the American sense at least, of the present popular cabaret entertainments. All his dance houses were conducted somewhat along the lines of the cabarets. A curious thing in this connection is that one night in New York City I dropped into one of these places. Somehow or other, the Hawaiian dancer who was featured as the Princess Ukalee-Ukali, found out that I was from the oil country. She asked me if I had ever heard of Ben Hogan, and if I knew or recollected a woman who lived at a place called Petrolia where she was known as 'Kit' Hogan. I told her I did. I said I had a distinct recollection of seeing 'Kit' Hogan one day with a baby in her arms. 'How remarkable,' replied the Princess, 'I am that baby.' Apparently she was proud of her supposed descent from the house of Hogan.

"Well, good night, gentlemen, I am very pleased to have met you all. Hogan was a strange character and I am going to speak as well of him as I possibly can. He was a moralist in disguise, I often think."

After the physician had left, the Widow's Son began to talk about the old towns, the old scenes, and matters connected with Hogan. He remembered hearing of a celebration by the members of the Oil Exchange at Parkers Landing. Neil Burgess, the actor, was the guest of the speculators. The entertainment was continued in the evening at Hogan's 'Palace of Pleasure' on the Allegheny river. They bought and

sold oil certificates by the millions for Neil's benefit and they pledged him with wine and song until the stars appeared. "Greatest and finest time I ever had," said Neil. "The only thing that spoiled the night was the solemnity of the Dutch proprietor of your Floating Oil Exchange—the man you called Ben."

The Widow's Son remembered the Castle, the Steel Trap, the Piano House, at Petrolia, and Dutch John's house at Parkers Landing. In all these places murders and other outrages have been committed and, strange to say, Hogan usually appeared as the man who furnished the funds to bury the dead. It was not much, of course, but was something after all. "Suppose," said the Widow's Son, finally, "that instead of squandering our 'protection money' in a free trade city—the money which we won on the recent election like gamblers and sharps—suppose we send it out to Hogan's Flop in Chicago. It may do more good there than if disbursed along the Great White Way for wine, women and song."

"I object," said the Money Seller, "that's too much like a personal sacrifice—too much Hogan."

"Perhaps so," rejoined the Widow's Son, "yet, like Hogan, you are a product of conditions yourself, with this distinction—Hogan may be said to have lived for others by final example and by extraordinary sacrifice. You live solely for yourself, your pleasures and your gratifications. My money goes out to Chicago to the Flop. You can put yours out at interest if you wish, old chap. It may be difficult to vindicate the dive keeper. It is far easier, however, to praise, pardon and excuse him, than it is to eulogize some fault finders now alive. Good night."

PIONEER TELLS OF EARLY EXPERIENCES.

Robert Allison tells two interesting anecdotes relating to the first Winton car which he purchased in 1898. One day as he was driving to Philadelphia, he was observed at a distance by a farmer and his family, who quickly deserted their wagon and scampered up a high bank to get out of danger. "But the old gray mare attached to the wagon stood perfectly still and calmly looked me over as I chugged by," says Mr. Allison. "Since then I have had a good deal of respect for horse sense."

In Philadelphia, Mr. Allison dodged a big dray and almost ran down a policeman. "I was exonerated by the officer, and went on my way," Mr. Allison remarks. "Later I told of the incident to another officer, and I shall never forget his reply. 'For goodness sake, man,' he exclaimed, 'don't kill a policeman. It costs every man on the force $3.00 every time a policeman dies.' This goes to show how all of us think of ourselves first; he didn't worry about how much more than $3.00 it might cost me."

ELWOOD HITZEL'S REST.

By Frederick M. Riegraf.

"NOW for a good month's rest."

The speaker stretched his legs as he settled comfortably on the hotel porch. He was Elwood Hitzel, Savannah's best detective. He had been a busy man for the last six months, running down a gang of criminals that were pestering the city and worrying the life out of the officials, making them lose their sleep, their appetite, and what was more, their pleasures.

Hitzel had, after six months' hard work, succeeded in running the gang down and all were now serving terms in the state prison. But in his victory, when he was overpowering the desperate leader, Hitzel got a crack on the head and the doctor had advised a month's complete rest away from the city and where he would not be apt to get into any excitement. So, as soon as he had finished his case in court, he was given a month's vacation by his happy superiors.

He at once went to a small hotel in the southwestern part of Virginia where we now find him. Here he was far away from crime, he had nothing but the quiet and peaceful mountains to look at. What a dream to this man, so used to danger. He was fifteen miles from the nearest railroad. Is it any wonder that he stretched himself out so comfortably on the porch and spoke the words that open this story?

It was about a week later, in the middle of a bright, sunny afternoon, that we again find Elwood on the hotel porch. He was nearly asleep when two natives, men, met near the porch, and the detective heard the conversation plainly.

"Well, how be you?" he heard one say.

"Oh, alright, after my run last night," the other answered.

"Have a run, did you?"

"Yes, I seen the spook down at old Rouch's house."

"Did you really see that thing?"

"Yes. A pretty woman all dressed in white. Now you see her and now you don't. I stayed there as long as I could stand it, then I run down that there road as fast as my legs would carry me."

"I hear quite a few folks in these here parts have seen that there thing lately."

"Yes, you'd better keep away."

"What was it like?"

"Well, I was walking along the road, when I saw a light in one of the windows in the old house. You know it has been empty for a long time, for the last ten years anyhow. I had heard people talk about seeing a ghost in the old place, but I never believed in ghosts, so I stopped under one of the trees to see

what was going to happen. Everything was dark and quiet. After a while, when I had stood there until I was beginning to think I hadn't seen anything at all, there came a light in the second story window; I looked, and there standing in one of them windows was a pretty woman, gee, but she was pretty. She seemed as if she was the light herself, as if she was afire, but I didn't see no flames on her. All at once she was gone, just as if someone had blown the light out. I stood there awhile, then the first thing I knows, she comes again in another window just as quick as if some one had turned on a light, then—again she goes out. I did not wait to see if she come back again, as I just thought maybe she might take a notion to stand along side of me next time, for pretty women like good-looking men, you know; so I just showed her how fast I could run."

Hitzel was wide awake now, the training of years was too strong. Here was a mystery in this quiet mountain. He did not believe in such a thing as a ghost, nor anything of that sort. Then what was it these mountain people were seeing in this old empty house? They were not lying; if only one had told the ghost tale, he might have thought it a fallacy, but there were a number who had seen it. What was it?

In this man's mind, who was used to the ways of people and who had untangled many mysteries, it was simply that some one or more, was trying to scare these people away from the Rouch house.

But why? Was it simply a joke, or was there a hidden meaning under it all? Something deeper and with a purpose?

"I will find out," he muttered, rising.

He forgot that he had come out on the porch to take an afternoon nap, he forgot that he was on a vacation for a month's much needed rest with strict orders from his doctor to avoid all excitement. He forgot everything, except that there was a mystery in the empty house on the mountain, and like a hound who finds the scent, he was ready to attempt to solve the puzzle, to find out why and by whom this thing was being played.

He walked carelessly into the hotel and seeing the proprietor sitting in the office, he strolled over there.

"Where is the old Rouch house, that I hear people talking so much about?" asked the detective.

"It is about two miles down that old lonely road I showed you yesterday."

"Is it empty?"

"Yes, and it has been ever since old Rouch went to New York, where he got rich. He never would sell the old house, saying he wanted to keep the place he was born and raised in."

"What is the quickest way to get there?"

"You want to see the old place?"

"Yes."

"Well, I can tell you how to get there, but you had better not go, you better be careful, for I hear there is a ghost out in the old house."

They both laughed and he gave Elwood directions how to get there. Elwood looked at his watch, and seeing that it was only a little after three o'clock, started out to get a look at the place in daylight, so as to get the lay of the land.

When he arrived at his destination, he stopped in the road in front of the old house and looked it over, and promptly came to the conclusion that it was a good place for anyone to play the spook game. It sat in the side of the mountain, which ran almost perpendicular to a great height behind it and there were large, thick, bushy trees all around the front of it. The yard was surrounded with a paling fence, many of the pales missing and in some places the fence was broken down and the yard was overgrown with tall weeds and grass.

The house itself was a two story frame affair, and was in a fair condition for one that had been empty for so long. Even the windows were mostly intact, a few panes of glass were broken, but not many.

After Hitzel had studied the outside a while, he entered the old broken gate, which lay rotting on the ground, broken from its hinges. He continued on up through the weeds and overgrown grass. There was a slight trace of a path leading from the gate to the front door, but it showed no evidence of being recently used. He tried the door and found it unlocked, but it opened stiffly and creaked loudly as he pushed it open. He found that the house contained two rooms on the first floor and two on the second, the stairway leading up from the front door between them.

He looked for traces of intruders in the dust, as old empty buildings accumulate more or less dust; but this one was an exception, a fact that struck the detective as being very peculiar, as he could find no trace in the dust because there was no dust. He searched the house twice without finding the slightest clue ,but as he was making his third attempt, he discovered a path, leading from one of the second story back windows, which, as the house sat in the side of the mountain, the ground was even with the sill.

He crawled through the window and followed this trail, which plainly showed that it had been used recently, and often. It wound up and then down the steep mountain side, at one place coming within fifty feet of the road, where it crossed a small brook. Elwood crossed this and continued on the path, which wound its way on up the mountain, until finally it came out on a piece of rocky ground of about two acres, where it was lost. He circled this place two or three times, but could not find the least sign of a path leading from it, only the path he had followed up the mountain. He then went over the rocky ground carefully, but there was no opening anywhere. Hitzel paused—he was puzzled. He looked at his watch and saw that it was getting near supper time at the hotel, so he went back over the path, looking carefully for some trace of where any one had left it, but could find none.

After supper he started out for the haunted house again. It was

dark this time when he reached the broken gate. Slipping through, he took up a place under one of the trees, to wait and watch. Beginning what was to prove one of the most exciting nights of his adventurous career, a night that he would remember to his dying day, one of surprise and danger. He did not think so now as he stood in the dark shadow of the tree.

He stood silently waiting. Waiting for what? He did not know, but he was aroused. He knew that the country folks had seen something at this place. But what? That was what he came there to find out; he knew that someone had an object in view, the lost trail leading from the rear window had ended all his suspicions of it being a joke.

So what was the object?

He was determined to find out if he could. Perhaps he would meet a desperate criminal. But that did not deter him in the least; he had met and conquered desperate men and women before, so he did not give this the smallest thought.

The minutes flew slowly by as he stood silently under the tree, watching the deserted house. All his senses were on the alert for something to happen. Not a sound broke the stillness of the night except the chirping of a few crickets and the deep bellow of frogs in a distant pond. Once he heard the barking of dogs in the distance, but that was all.

He had been there about an hour when he thought he heard a noise in a tree that stood close to the house; with his hand on his gun and his eyes straining to peer in the darkness, he waited; but he heard it no more; it had only been a slight rustling of the leaves and he came to the conclusion that it was only a bird spending the night in the thick branches.

Another hour slipped slowly by, then the first real thing of the night happened. Hitzel suddenly saw a woman standing in one of the second story windows. It seemed as if she came in an instant; one second the window was dark—the next she stood there. She was a beautiful creature; with a handsome face and shapely form. She was dressed in a white clinging dress . She stood as still as a statue, looking out into the night, with a dreamy far away look in her dark deep set eyes.

There did not seem to be any kind of a light in the room, yet she stood there plainly visible. It was as the man had told the other. It seemed as if she was the light, yet there were no flames about her.

Then?

She had disappeared as quickly and as mysteriously as she came. But to where, and how? Elwood was at a loss to say. It was just as if someone had turned off a light.

Then?

She appeared in the other upstairs windows, just as she had in the first. One second it was dark—the next she stood there plainly visible in the soft light, clearly and distinctly.

Then?

Again as if someone had turned out a light, she disappeared. Elwood was fully convinced that she was real flesh and blood, but her sudden appearance and disappear-

ance had him puzzled, but he knew that there was some explanation of it and he was determined to solve it. So he stole directly toward the house.

Just as he was passing one of the windows on the ground floor, she appeared in that window, almost within reach of his arm. He drew back quickly in the shadows, but he was certain that she had given a start, and that she had seen him.

He waited until she had disappeared, trying to solve the riddle as to how she did it, but, although he was within a few feet of her when she again vanished, he could not get the slightest inkling as to how she did it. Thinking that she would appear in the other window on the first floor he waited wishing to tackle the job when she was upstairs. His reasoning proved correct for she soon appeared in the other window of the ground floor and after standing there a few moments again disappeared.

He then stole to the front door and waited until he saw the light in one of the windows of the second story, then he slowly pushed the door open, trying not to make any noise, but despite his caution the door squeaked loudly. With his revolver in his hand he glided quickly up the stairs, drawing his pocket lamp as he went. As he reached the top he saw a dim light coming from the room on his right.

Just as he entered the room the light went out—quickly he flashed his electric light towards the window. He saw the same pretty woman standing there, she was wrapped in a long cloak . She turned quickly at the sight of the strange light — she stood still — looking squarely at the detective; he saw there was fear mingled with a look of hate on her face, but before he could move or speak he received a crack on the head, followed by darkness; he sank to the floor.

When he recovered his senses, he was lying on the floor, securely bound hand and foot.

He saw that the room was now lit by a small lamp and that a blanket had been stretched over the window to keep the light from showing to anyone who might chance to pass by.

Elwood saw that there were two people in the room besides himself, the beautiful woman who had played the ghost and another woman, much older. The ghost was standing and the other was sitting on a box near him.

"So you have come to at last," said the ghost. "I was beginning to think mother had hit you a little too hard and finished you."

"So your mother was the one who gave me the crack on my head?" answered the man, feeling a sharp pain behind his ear, as he looked at the older woman.

"Yes."

"Why did she do it?"

"Because WE wanted to get you, ELWOOD HITZEL."

He gave a start of surprise, to think that she knew his name and that she should say she wanted to get him, for there was hate as well as anger in her tone and manner. The detective racked his memory, trying to recollect where he had ever seen either of these women be-

fore. For while her face did not seem altogether a strange one, his excellent memory could not place her in connection with anything of the past.

"Was all this ghost play reeled off for my particular benefit?" he asked, not in the least worried by these women, thinking them just two cranks, or that they were seeking some cheap notoriety by snaring the great detective, or that the same would have happened to the first person who ventured into the house.

"It was and you walked right into the trap," she answered, with a mocking laugh.

"So it was set for me?"

"Yes. We found out where you had gone for your vacation, so we promptly came here to these pretty mountains too. We thought for a while, then this plan came to me. I knew you never could sit idly in the hotel with a ghost mystery so near, so I laid my plans to catch the celebrated detective 'ELWOOD HITZEL,' and he, like the clever little boy he is, walked right into it. I covered a dress with phosphorus, then wearing a heavy cloak to hide it, we came to this old house. My mother would lie along the road and give me a signal when she saw anyone coming."

"How?"

"By means of an electric buzzer. No one would be apt to notice the wires through the long grass in the yard. Then I would go to the window and throw the cloak open quickly, the phosphorus did the rest. It made me a very neat little ghost and the means of appearing and vanishing at will.

"You see I don't mind explaining to you how easily you fell a victim to a very simple trick, for your career is near it's end, you will never send another man or woman behind cold stone walls, depriving them of their freedom. It did not take long for you to hear that there was a ghost in the vicinity, then of course you knew there was no ghost and you had to see what it was. You see I knew just what you would do. Today I saw you hunting for the rest of the path that I made for you to the rocky piece of ground up on the mountain. We always left the path at the little brook, walking in the water to the road."

She paused with another sneering laugh, that went through the detective's body like a piece of ice; for he was now thoroughly aroused to his danger. He saw that he had no crank or publicity hunter to deal with, but a clever and brainy woman.

"But why all this trouble for me? Why do you want me?"

"W-H-Y?" she almost screamed, her laugh vanishing like magic, her face flushing with anger. "I want you so as I can put you out of the world; you low man hunter; you are worse than a dog; y-o-u; who hunt men—taking their freedom from them—the gift that we all value above everything else. But you have done it for the last time, for I am going to kill you."

"What have I ever done to you?" asked the man with a coolness he was far from feeling.

"You sent my brother to prison.

The kindest and most loving brother and son that ever walked on this earth. Sent him to live behind those cold stone walls for twenty years. I am going to revenge my brother."

"Who is your brother?"

"Bert Nellar."

Instantly the puzzle was solved to Hitzel. Bert Nellar was the leader of the foxy band of criminals, whom the detective had just rid the city of Savannah. Nellar had been one of the cleverest crooks in the criminal records of the country. And now the man who had rid the public of this great menace lay powerless, bound hand and foot, in the old empty house far out on the mountain. A prisoner in the hands of Nellar's beautiful sister, who had already shown that she was as clever as her notorious brother, by the successful ruse she had planned and carried out, to get this great detective in her power.

Hitzel had been in many tight and dangerous positions, but never one that looked as this one did now; in this empty house in the hands of two desperate women without the slightest hope of assistance from the outside.

"What are you going to do with me?" he asked calmly.

"Kill you."

"How?"

"We are going downstairs, but just before we go out the door, I will hold this lamp as high as I can —then—let it slip out of my hand, falling to the floor. Then I think the spilled oil will do the rest. Once this house catches fire it will burn like tinder, for it is old and dry."

"And there will be no evidence left to tell the world what became of Elwood Hitzel, *Savannah's great detective.* You see I have everything carefully planned out, if the people do find a few bones they will think that it was the one who was playing spook and had accidentally set fire to the house and was burned to death."

She laughed scornfully and sneeringly at the man lying on the floor. He saw the truth in all she said. He could not see one weak point in her well laid plans.

With a mocking "Good-bye" she left him, followed by her mother. He heard them go down the stairs; he heard them reach the bottom; he heard a smash and knew that she had let the lamp fall.

He struggled with the cord that bound his wrists, but the clever woman had done her work only too well, he could not gain any results, but still he tugged and strained. He could now smell the smoke that was drifting up the stairs.

He then tried to work his way to the window in the rear, that opened on the path that he had followed that day. As he started to squirm along the floor, he heard a noise at the front window, he paused; it seemed to him as if someone was trying to open it; then he saw the blanket move and a man entered the room. Elwood could now see the reflection of the flames on the door leading to the stairway. Now the question was—was this man friend or foe? Or was it merely imagination caused by the closeness of death and that in fact he did not see anyone at all? Would the man vanish

and leave him to the mercy of the fire?

What a fate for this brave and fearless man to be burned alive.

He groaned aloud at the thought.

The man came swiftly to his side. The room was now dimly lit from the fire below, which was gaining swift headway. The stranger cut the cords that bound the detective and started back towards the window he had entered by.

"Not that way—they will see you —come, this way," said Hitzel quickly.

Elwood recognized the man as one of those who had met near the porch that afternoon and whom he had overheard talking about the ghost. The fire was now breaking through the floor.

The detective led the way to the window and out on the blind trail.

"How did you come to be on hand to save my life?" he asked.

"I wanted to see what the ghost was like," answered the man, as they silently circled the burning house. "I do not believe in ghosts, so I got there about dark and clumb into the tree nearest the front window. I saw you come and stand under one of the trees. Once I nearly went to sleep and slipped, but I managed to catch myself before I fell."

"That was the noise I heard in the tree and thought it was a bird."

"Then when the ghost came I saw you steal into the house. I was on a big limb right outside the window and saw and heard all, until they put the blanket over it, that stopped me from seeing, but not from hearing, as I crawled closer to the window and you know the rest."

"We must capture these women. Will you help me?"

"Yes."

Elwood searched through his pockets, but found that he had been cleaned out of all his weapons, the only thing left was a small pocket-knife.

Elwood led the way up the road, explaining to the man his plans for the capture of the two women. The man was only too proud to think that he had a chance to help the celebrated detective.

They were almost to the gate before they saw the figures of the two women outlined against the fire. They crept softly towards them. When almost so they could touch them, they heard the younger one say:

"I wonder how Elwood Hitzel likes fire?" She followed this up with a hard cruel laugh.

"What if he should happen to escape?"

"He will not escape."

"No—he has already done that trick," said the voice of Hitzel right in back of her.

With a scream the two women turned swiftly as the men sprang on them. The mountaineer soon had the older woman secure; but Elwood had a hard and desperate struggle with the frantic sister of Bert Nellar.

But now they are both spending a few years in prison, while Elwood finished his month's vacation in rest and peace.

OBITUARY.

Col. John J. Carter, of Titusville, Pa., one of the oil country's most successful, widely known and esteemed men ever connected with the oil business, died at the Hotel Gotham, New York City, on January 3, 1917.

Col. Carter was born in Ireland in 1842, coming to America when a child. He answered Lincoln's first call for volunteers and enlisted as a private, serving throughout the war with distinguished bravery being successfully promoted through all the ranks until he had reached the rank of captain with brevet of colonel at the close of the war. He drilled his first well at Pleasantville, Pa., in 1865. With the opening of the Bradford field Col. Carter was among the first to realize its value. From this time on his success was almost phenomenal until he retired in 1915.

John Newell, a prominent hotel man of Pittsburgh, and oil man, having been connected with both businesses for many years, died in that city on December 2, 1916, from injuries received by being struck by an automobile while alighting from a street car near his residence, on November 29.

Mr. Newell was born in Ireland 72 years ago, coming to the United States with his parents in 1850. He was one of the best known figures in Pittsburgh and Newell's Hotel on Fifth avenue was the headquarters of the oil fraternity for years.

Mr. Newell is survived by his wife, three sons and one daughter. The late Daniel O'Day, Standard Oil magnate, was a brother-in-law.

Mr. Newell left a fortune estimated at $1,500,000. He was buried at his old home, Titusville, in the presence of a large number of old time friends besides his relatives.

I. G. (Charley) Smith was found dead in bed at a Cambridge Springs hotel November 6. His death was due to heart trouble with which he had been troubled for some time.

Mr. Smith was aged 65 years and had been a familiar figure in Butler, Penna., for many years, having at one time served as its mayor, making a good conscientious servant of the people.

Twenty-one years ago the Forest Oil company commenced buying oil production and leases in Butler county, Pennsylvania, in a spectacular manner. Some fair properties were picked up but as a rule large sums were paid for properties that did not show a return of fifty cents on the dollar. Mr. Smith was a beneficiary in one of the largest purchases made at the time. He immediately retired from the business of contracting and drilling oil wells and became a capitalist. His wealth of $500,000, all in gilt edge stocks, goes to a brother, two sisters and some nephews and nieces. He was a prominent member of the Elks and his remains were laid to rest in the Elks' plot, Butler.

John D. Archbold, president of the Standard Oil Company, of New Jersey, died at his home at Tarrytown, New York, on Tuesday, December 5, after a two weeks' illness following an operation for appendicitis. Thus passed away one of the practical oil men that helped to build Standard Oil as a great company of power and efficiency.

Mr· Archbold was born in Leesburg, Ohio, in 1848, and came to the oil region in 1864, where he remained for eleven years working in the petroleum industry. While in the oil country he organized the Acme Oil company and became its president, and his brother, C. W. Archbold, who died two years ago, was its secretary. Soon after this Mr. Archbold became a director of the Standard and his great work was begun.

JOHN D. ARCHBOLD

Mr. Archbold was married to Miss Annie Mills, of Titusville, in 1870, who survives him together with a son, John F. Archbold, of Thomasville, Ga., and two daughters, Mrs. M· M. VanBuren, of Newport, R. I., and Mrs. Armar D. Saunderson, of Lynhurst, England. One brother also survives, W. D. Archbold, of Denver, Colorado.

Mr. Archbold was a member of a number of clubs and associations and was at one time president of the board of trustees of the Syracuse University, his largest gift of money ($400,000) being for the construction of the big stadium for the university, which bears his name. Mr. Archbold was very democratic in his life and never made display of his great wealth. His fortune has been estimated at $100,000,000.

Captain Joseph T. Jones, aged 74, pioneer oil operator in the fields of Oil Creek, Bradford and West Virginia, and railroad promoter and builder, died at Buffalo, N. Y., December 6. Captain Jones was a veteran of the civil war and was twice wounded. Enlisting when only 19 years of age, he served for three years. He was promoted to quartermaster sergeant, after to second lieutenant, and, still later, in recognition of his services was given a captain's commission.

The funeral occurred at Buffalo on December 8 and was largely attended by prominent men and business associates throughout the country.

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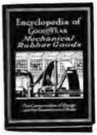

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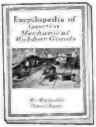

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Oil Developments and Markets
Review of 1916

THE result of the year's work in oil furnishes a paradox that does not often occur, in fact it has never occurred in the oil business, and that is while the market has ruled higher than for nearly forty years yet the output of oil in the United States has broken all records. Placing it in another light, from the market standpoint, especially in the eastern fields, was the most profitable and the development of new pools the least successful since the days when a few counties in Northwestern Pennsylvania constituted the entire industry that now has grown world-wide.

The average price for what is known as the Pennsylvania grade was $2.45 per barrel for 1916 which is a higher average than any year since 1876 when the average was $2.61. The highest price paid for that year was $4.23, the lowest $1.47 and the average as stated.

On January 28, 1916, the market for Pennsylvania grade had slumped to the low price of $2.35; on February 21, it was advanced to $2.40; March 6 to $2.50 and March 17 to $2.60. Mid-Continent oil was also marked up until $1.55 was recorded. These prices had little effect in the eastern fields where there was very little drillable territory in sight and the high cost of material made experiments where only small wells could be expected an undesirable occupation. In the Mid-Continent fields, however, it was different. Under the stimulus of the best market ever experienced for that oil, work was started with a rush and with the bringing in of several gushers in what looked like another Cushing proposition the pipe line people were disturbed at the prospects and gave warnings of their unpreparedness to care for such a flood of oil that seemed to be ready to be poured upon them. This had no effect, so the drastic remedy of lowering the price became a necessity. On July 25 the Mid-Continent figures were reduced to $1.45 and Pennsylvania grade to $2.50. This led to a selling fever and the producers got rid of their credit balances in short order. A succession of cuts followed in quick order until on August 15 Pennsylvania grade was quoted at $2.30 and Mid-Continent at 90c on August 26, which proved to be the bottom.

Kansas furnished the bugaboo in the Eldorado and Augusta pools that caused the scare that led to the decline in prices. The latter field soon began to show unpromising conditions in its spotted character and the presence of water; the Eldorado, however, has been proving somewhat better but its effect

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on the market has been discounted.

Great expectations for the Shamrock pool never materialized very strikingly. It came upon the stage at a time when the Cushing was beginning to show signs of the sere and yellow and many anticipated that a second Cushing had been found. Money placed on its possibilities did not bring good returns. Like the poor player, it will not be heard of again as a market disturber. As a Mid-Continent producer stated, the work of combing the Oklahoma fields has already begun, the same as has been going on for so many years in the eastern fields.

On September 28, the Pennsylvania grade oil again was started on its upward turn and at this writing is $3.05. The Mid-Continent did not, however, advance until November 29, when it was sprung to $1.00 and since then has made seven more ten cent advances making it at this time $1.70—the highest it has ever been. All other grades of oil are selling at prices that no one dreamed possible a few months ago when the enormous output is taken into consideration. The producers who have been able to pick up old wells when the price was low and have coddled them through the years that have gone are the ones who are now enjoying the benefits of the highest prices paid since 1877.

There is one feature in the general prosperity of the oil business that needs a general sounding of alarm and that is the frenzied finance that appears to have struck the business. The capitalization of innumerable companies in the Oklahoma and Texas fields and the rush to buy this stock by the uninitiated can only lead to one result—the loss of money.

The export trade in 1916 has fulfilled all expectations for magnitude and the opening of the new year finds American companies more firmly entrenched in foreign fields than ever before.

The 1916 mineral oil export figures, however, will not entirely reveal the extent of this trade, as American refiners have been forced to turn down much foreign business because of the great domestic consumption and the hazardousness of the trade and the lack of steamships to carry the oil abroad.

A factor to take into consideration in a forecast of oil conditions for 1917 is the possibility of peace in Europe. This may have little effect upon our export trade but may slow up on our home consumption by a lessening of the unexampled industrial boom that carries with it an unprecedented use of oil. With the close of the war, markets that are now cut off would be opened up for our trade as it will be many months before the oil fields of Russia, Austria and Rumania are restored to their former conditions. And the other oil fields of the world that have been practically shut down by lack of material will require a year or more to get back to the same condition that existed before the war.

The preliminary estimates of the output of crude oil and report of the fields, made by John D. Northrop, of the United States Geological Survey, Department of the Interior, are herewith given. The following table

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shows by states the marketed production of petroleum in 1915 and an estimate of the production in 1916 in barrels of 42 gallons each:

State—	1915	1916
Oklahoma	97,915,243	105,000,000
California	86,591,535	89,000,000
Texas	17,467,598	26,000,000
Illinois	19,041,695	16,500,000
Louisiana	18,191,539	15,800,000
West Virginia	9,264,798	8,500,000
Pennsylvania	7,838,705	8,000,000
Ohio	7,825,326	7,400,000
Kansas	2,823,487	6,500,000
Wyom.-Mont.	4,245,525	6,300,000
Kentucky	437,274	1,200,000
Indiana	875,758	1,000,000
New York	887,778	900,000
Colorado	208,475	190,000
Other States	14,265	10,000
	281,104,104	292,300,000

(Note—These figures represent the oil marketed, not produced. The oil produced will, no doubt, show a much larger amount.—Editor).

The increase in 1916 is accounted for by the continued ability of the newer fields in the Mid-Continent and Rocky Mountain regions to supply enough oil from new wells to more than offset the normal decline in the older fields east of the Mississippi.

The incentives that caused the increase in 1916 include higher prices for oil at the wells, which encouraged drilling in all fields; a decrease in production in the Cushing pool, Oklahoma, which allowed the product of other Mid-Continent fields access to markets; and a greatly increased demand for crude oil, expressing the needs of a large number of new refineries that were installed during the period of over-production and low prices in 1914 and 1915.

The principal centers of increased production in 1916 were in Estill and Allen counties, Kentucky; Butler county, Kansas; Carter county, Oklahoma, and Converse, Park and Natrona counties, Wyoming.

As a consequence of an increasing demand for oil and a decrease in the stocks held by pipe line companies and purchasing agents, the market for grades of petroleum produced in California was uniformly strong throughout the year. The quotations posted on December 28, 1915, remained in effect until February 16, when all grades except Ventura county were advanced 10 cents. A further advance of 5 cents, posted April 1, likewise affected all grades except Ventura county. Subsequent advances of 5 cents each, involving all grades of oil produced in the state, became effective on September 20 and November 21.

Development.

Under the stimulus of relatively high prices for crude petroleum during the spring and early part of the summer of 1916, drilling was active throughout the country, not only in proved areas but in places far from developed areas of oil and gas. The greatest wildcat activity was in Kansas, Oklahoma, Texas and Wyoming.

Appalachian Region.

Aside from routine work of keeping the old wells producing to their full capacity, operations in the Appalachian fields consisted in the drilling of many new wells on "inside locations" in the defined areas and in the re-opening of a great number of "stripper" wells, whose operation is unprofitable when the price of oil is below $2.00 a barrel.

In Pennsylvania the extension of

the Dorseyville pool, in Allegheny county, was drilled by a number of wells, which produced from the 3rd sand and whose capacities were above the average obtained in this part of the state. At the end of the year interest in this state was centered in Springhill township, Greene county, where a wildcat test well on the George Isminger farm, completed early in December as a 200-barrel oil well, was interpreted as indicating the discovery of a new pool of oil in the Gordon sand.

In West Virginia the most important results of field activity in 1916 include the discovery and partial development of a rich pool of oil in the Thirty-foot sand on Dent's Run, near Mannington, Marion county; and the proof of a northeastward extension of the Berea sand pool in the Cabin Creek district, Kanawha county, beyond the boundaries of the territory controlled by the company that discovered the pool late in 1914.

The petroleum output of Kentucky was increased nearly 200 per cent as a result of the remarkable success that attended the search for extensions of the Irvine pool, in Estill county, and of the Scottsville-Petroleum district, in Allen county.

The quest for oil in Tennessee was continued in a desultory fashion in 1916, but without notable success. Late in September it was reported that oil in commercial quantities had been discovered in a well drilled near Glenmary, in the southern part of Scott county, about 15 miles southwest of Oneida, the seat of the oil flurry in 1915.

The mainstay of oil production in Eastern Ohio in 1916 was the Union Furnace district, in Hocking county, which supplied a large number of creditable wells during the year. A gas field of considerable yield was developed in Jackson and Richland townships, Vinton county. In Knox and Holmes counties drilling in the vicinity of the wildcat producer completed near Brinkhaven in 1915 was attended with indifferent success. Southwest of Cleveland, Cuyhoga county, a number of oil wells of small capacity were completed. An oil well having an initial capacity of 25 barrels resulted from a test a mile to the east of a previous producing wells in the Wooster field in Wayne county.

Lima-Indiana.

Despite the fact that the greatest activity in drilling in the Lima district of Northwestern Ohio was in Wood county, the best results were obtained in the Tiffin field, Seneca county. The re-drilling of old territory in Van Wert county furnished convincing evidence that the oil resources of that part of the field have by no means been exhausted.

In Indiana the bulk of the field activity in 1916 was in the southwestern part of the state. The completion in August by the Indian Refining company of a 50-barrel well near Habelton, in Washington township, Gibson county, north of the Princeton pool, furnished an incentive for further activity in the hope that a new pool might be developed.

Illinois.

No developments of consequence resulted from drilling activity in Illinois in 1916, and an appreciable decline in oil production was re-

corded. The productive territory in the Colmar district, McDonough county, in the western part of the state, was practically all drilled, and wildcat activity in adjacent counties failed to discover new areas of equivalent value.

Mid-Continent Region.

So successful in developing new production was the drilling campaign in the Mid-Continent region, inspired by the waning of Cushing and the prompt advance of the crude oil market, that Oklahoma was enabled to retain in 1916 the premier rank as an oil-producing state, and Kansas to secure recognition as an important source of crude oil.

The discovery of a prolific "pay" below the Bartlesville sand in the Cushing district, Creek county, Oklahoma, and the completion of a great number of gusher wells in the Shamrock or south extension of that district, together with the successful development of the Augusta and Eldorado fields, in Butler county, Kansas, caused the over-production that depressed the market for all high grade crude oils east of the Rocky Mountains during the summer and early part of the fall.

In Kansas the Augusta and Eldorado districts were the centers of drilling activity. At the end of 1916 there were about 500 producing wells in the Eldorado district, the combined daily capacity of which was estimated to be in excess of 5,000 barrels. In the Augusta field more than 100 producing wells were drilled during 1916, and at the end of the year the estimated daily capacity of the field was in excess of 30,000 barrels. Significant discoveries of oil, the value of which had not been determined by the end of 1916, were made in Kansas, near Beaumont, Greenwood county, and northwest of Winfield, in Cowley county. In the old shallow-sand fields of Kansas drilling activity was attended with especially favorable results in the Paola district, Miami county, and the Wellsville district, Franklin county.

Outside of the Cushing district, which remained the center of interest in Oklahoma, drilling activity was much greater in 1915. This was particularly true in the Healdton field, Carter county, where a large increase in the production was recorded and where several million barrels of oil were placed in field storage. Difficult drilling and the exceptional depth of the productive sands retarded development in the Blackwell field, Kay county, but the few wells completed in 1916 fully justified the confidence of the operators in the future of this district. In the southern part of the Osage Reservation an especially rich pool of high-grade oil was discovered and partly developed by the Tidal Oil Co., on its leases near Hominy. Operations in the Stone Bluff pool, discovered in 1915, resulted in the development of a small but productive area yielding high grade oil in southern Wagoner county. Six miles south of Billings, in Noble county, the discovery in August of natural gas and of encouraging showing showings of oil resulted in the starting of other tests in the hope of developing an important field. To the west of this locality,

The above reproduction shows in reduced size the display made by Kaufmann's "Big Store," Pittsburgh, occupying one of their largest windows, of the new oil country story, "646 and the Trouble Man," by Charles H. Oliver. In the centre of the picture may be seen the anvil, upon whose face was fashioned the tools that drilled the well that gave to the world the great oil industry. Surrounding the anvil are the books and large pictures from which the illustrations appearing in the book were reproduced.

"646 and the Trouble Man," issued recently from the renowned publishing house of Rand, McNally & Co., Chicago, has met with great success. The notices received from the press of the United States have been exceedingly flattering and indicate a large sale. Copies may be had by addressing the Oil and Gas Man's Magazine, 411 Fourth Avenue, Pittsburgh, Pa.

in Garfield county, a wildcat test, completed in November as a 50-barrel oil well, was interpreted as the forerunner of a promising development near Garber.

In financial circles the leading feature of the year's developments in the Mid-Continent region was the merging of many independent interests, producing, transporting, and refining, into strong corporations, among which the Sinclair Oil & Refining Corporation, Cosden & Co., and the Cosden Oil & Gas Co., are perhaps the most conspicuous examples. Scarcely less important was the absorption by the Cities Service Corporation of many independent oil and gas producing, oil-refining, and gas-distributing interests in this region.

Central and Northern Texas.

An increase in drilling activity throughout central and northern Texas, the discovery of a productive deep sand at Electra ,and the extension of the productive area at Burkburnett resulted in an appreciable increase in the petroleum output credited to this area. Wildcat activity resulted in promising discoveries of gas on the Hess and Edmonson ranches, in northern Palo Pinto county, of oil and gas near Caddo and Breckenridge, Stephens county, and of oil near Holliday, Archer county.

In Eastern Texas a wildcat test near Bethany, Panola county, was completed in July as a productive oil well of sufficient capacity to justify additional drilling in that locality.

Northern Louisiana.

The important developments in Northern Louisiana in 1916 include, in Caddo Parish, the extension of productive territory in the Mooringsport district, south of Caddo Lake, to the south and west, and the completion of a number of prolific gas wells in the new district south of Shreveport; in De Soto Parish, the discovery of an undefined area of promising oil production in the vicinity of Logansport, near the Texas boundary; in Red River Parish, the discovery of new oil territory in the Grand Bayou district, southwest of the Crichton field; in Bossier Parish, the discovery of an important source of gas near Elm Grove, west of Lake Bistineau; and in Morehouse Parish, the discovery of a gas field of promise a few miles southwest of Bastrop.

Gulf Coast Region.

Humble easily retained first rank in activity and of production among the salt-dome pools of the Gulf Coastal Plain, despite a decided waning of the supply of oil obtained from its deep sands. Sour Lake was a steady contributor to the oil output of this region throughout the year. The completion late in October of a 6,000 barrel oil well, at a depth of about 2,000 feet, in the Goose Creek pool added largely to the output of this erratic pool and made it the center of drilling activity at the end of 1916.

High average prices for Gulf Coast grades of oil in 1916 resulted in greater activity in all the pools than in 1915, and to this activity most of the old pools responded with increased production.

Rocky Mountain Region.

The petroleum output of Wyoming was materially increased in 1916 as a result of the installation of a refinery at Greybull, Big Horn county, by the Greybull Refining Co., and of the completion of a pipe line by the Illinois Pipe Line Co., from the Elk Basin field, in northern Park county, to the Burlington railroad at Frannie.

The most notable development of the year in Wyoming was the opening of a new oil field on the Big Muddy anticline, in western Converse county. The potential importance of this new field lies in the favorable geologic structure involved and in the demonstrated presence of high grade oil in two principal zones of production that correspond in position to the Shannon and the prolific Wall Creek sands in the Salt Creek field, to the northwest in Natrona county.

Of less potential importance was the discovery of oil in small quantities on the Lost Soldier flats, in the northeast corner of Sweetwater county.

A number of productive wells were completed in the Pilot Butte field, Fremont county, opened in 1915 by the Hall Oil Co. In Oregon and Little Buffalo basins, in eastern Park county, additional drilling in 1916 resulted only in gas production.

Although a number of wells were drilled in southern Montana in 1916, oil production in this state at the end of the year was restricted to the north end of the Elk Basin field, in southern Carbon county.

California.

A moderate increase in production was the response of California's oil fields to the steady advance in prices that was the principal feature of the crude oil market in this state. Drilling activity in all fields was nearly twice as great as in 1915, but the size of the new wells completed contrasted strongly with those of three and four years ago. The scarcity of oil of fuel grades resulted in especial activity in the Kern River and McKittrick fields.

News comes from Oklahoma that an important strike has been made in Noble county, 50 miles northwest of the Cushing field. It has the ear marks of a market disturber at present but will require some days yet to determine its calibre. The well has caused a rush to Noble county and leases are bringing fancy prices on the strength of the well's showing.

The advance in the price for the Mid-West article and the presence of plenty of money has started wildcatting on an enormous scale and it is not without precedent that the development of a rich pool or two will be found in the next few months in Oklahoma, and Kansas and probably in Wyoming and Montana.

Kentucky has been bidding for a front seat in the oil report the past several months and has succeeded in showing a nice daily production. As stated before in these columns "Old Kaintuck" is very uncertain in its producing sands. Today you have an oil well and, possibly, tomorrow you have a water well.

Prospectively speaking, Tennes-

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see shows signs of great possibilities for the coming season, for much test work is being planned along the Kentucky border counties. The recent finds near Glenmary, and the developments of many years ago in Fentress, Overton and other northern counties of the state, is creating faith among the fraternity, with a certainty that paying pools will be found equalling those of Kentucky. During the past few months many thousands of acres have been leased up, indicating much activity for the coming spring.

In the Mid-Continent field, notwithstanding the efforts put forth, there was a decrease in the total output of oil in Oklahoma and Kansas in 1916 compared with that of 1915, of 2,686,733 barrels. The total for 1916 was: Oklahoma, 106,190,240; Kansas, 13,042,800; while the total for 1915, both states, was 121,919,-773.

High finance in petroleum, as witnessed by the organization of more oil companies than have occurred since California went through this stage of the oil business, is one of the signs of the times. There have been some 15 or 20 new companies listed on the curb in New York City during the past year and down in Houston, Texas, there are some 28 companies listed on the exchange there, that have a par value of from $10.00 to $150.00 per share. Dealing in oil stocks not backed by reliable men is a hazardous investment.

The refining business has been very profitable during the year just closed. But there seems to have grown up more refining capacity than there is oil to supply them, this is especially the fact in the east and with oil placed on the present high plane some of the smaller refineries cannot compete in the bid for the crude stuff. This may also be the state of conditions in the Mid-Continent field the small refinery will, on account of the declining production and the consolidation of some of the big companies, have some difficulty in getting supplied with oil to operate with. The big companies will need all their oil to keep their own refineries going, so the small refiner is not disposed to be overjoyful at the elevation of the price for the crude article.

Mexico has the largest producing well in the world located in the Cero Azul district and making 100,000 barrels per day. The well has not been allowed to produce its full capacity and what it would produce if given full opportunity to show its calibre can only be surmised. Mexico is now second in the world's production of oil and with peace firmly established there is no telling but what it might pass the United States and take first place.

The Greatest Oil Deal in History.

Another big oil transaction is reported from the middle-west that makes the numerous other deals of the past year look like the proverbial 30 cents.

The Magnolia Petroleum Co. exercised its option on the properties of the Mc-Man Oil Co., on January 3, on which date the option expired. The purchase included all the property, production, oil on hand, tank farm, leases and other properties owned in Kansas and Oklahoma, ex-

cept its restricted department leases in Oklahoma within the territory of the Five Civilized Tribes. The property consists of about 80,000 acres of proven and unproven leases with a daily production of about 25,000 barrels, and approximately 2,000,000 barrels in storage. The purchase price is to be paid in cash and notes payable at various dates from the present to July 1, 1920.

By a separate transaction on December 30, the Magnolia Co. purchased the eight-inch pipe line of the Mc-Man Co., extending from Cushing to Addington, Okla., where connections were made with the Magnolia pipe lines. The consideration for this property is placed at $1,500,000 cash. The line will be operated as a common carrier.

By these purchases the Magnolia becomes one of the big leaders in Mid-Continent affairs. It gives the company a total daily production of about 45,000 barrels, and a surplus crude oil stock of nearly 7,000,000 barrels.

The selling company jumped into prominence very quickly by getting possession of valuable holdings in the Cushing field. The title Mc-Man has been a sort of conumdrum and topic of discussion ever since it got into the oil column. The company is composed of Robert A. McFarland, J. A. and T. A. Chapman and Earl P. Harwell. The Mc. of McFarland and the last syllable of Chapman forms the name.

The fields covered by The Oil City Derrick's monthly report of operations during December, had fewer completions, a larger production, and more work under way at the close of the month, as compared with November. The loss in completions was 120. The only large increase for any division was of 45 in Oklahoma. The largest falling off was 103 in Kansas. Gulf Coast was responsible for the largest increase in new production, the gain being 25,900 barrels, most of it furnished by a few wells. Oklahoma also shows a gain of 5,719 barrels, while Kansas lost 7,667 barrels. Smaller increases were reported from the Pennsylvania division and Kentucky, while the others showed a decrease.

Among the completions were 263 dry holes, or five more than in the previous month. Gas wells numbered 146, a decrease of three. The largest number of failures for one division was 60 in Oklahoma. The largest percentages of dry holes for completions were reported from the Gulf Coast and North Louisiana, the former showing 35 per cent and the latter nearly 60 per cent.

New work at the close of December showed an increase of 162 in the total, there being 859 rigs up and 3,078 wells drilling. The greatest increase in new work is reported from the Mid-Continent field, with a gain of 187 in the total. Changes in the other divisions were slight.

Subtracting the dry holes and gas wells from the total completions leave 1,136 productive oil wells. In November this number was 1,258; for October 1,257, and 1,431 for September. The report gives the grand totals as follows:

	Comp.	Prod.	Dry	Gas
Penna. Grade	529	6,383	95	58
Lima-Indiana	50	712	6	2
Central Ohio	34	30	1	31
Kentucky	126	3,529	20	3
Illinois	66	1,134	14	..

Kansas	175	12,780	13	12
Okla.-Arkansas	401	27,094	60	35
Texas Panhandle	49	1,151	8	2
North Louisiana	26	420	4	3
Gulf Coast	89	43,580	32	..
Total December	1,545	96,813	263	146
Total November	1,665	78,329	258	149
Difference	120	18,484	5	3

	Rigs.	Drg.	Total
Pennsylvania	263	571	834
Lima-Indiana	5	68	73
Central Ohio	52	75	127
Kentucky	6	133	139
Illinois	11	85	96
Kansas	168	423	591
Oklahoma-Arkansas	249	1292	1541
Texas Panhandle	41	131	172
North Louisiana	36	109	145
Gulf Coast	28	191	219
Total December 31	859	3078	3937
Total November 30	678	3097	3775
Difference	181	19	162

The prices paid for oil of various grades by the purchasing agencies are:

Pennsylvania	$3.05
Mercer Black	2.43
Corning	2.38
Cabell	2.35
Somerset	2.18
Ragland	1.00
North Lima	1.78
South Lima	1.78
Wooster	2.00
Plymouth	1.83
Princeton	1.82
Illinois	1.82
Kansas and Oklahoma	1.70
Yale	1.70
Indiana	1.63
Healdton	.90
Corsicana Light	1.70
Corsicana Heavy	.85
Electra	1.70
Henrietta	1.70
Thrall	1.70
Strawn	1.70
Moran	1.70
Crichton	1.20
De Soto	1.50
32° to 34.9° Gravity Caddo	1.45
35° to 37.9° Gravity Caddo	1.50
38° and above gravity Caddo	1.60
Caddo Crude	.95
Canada	2.18

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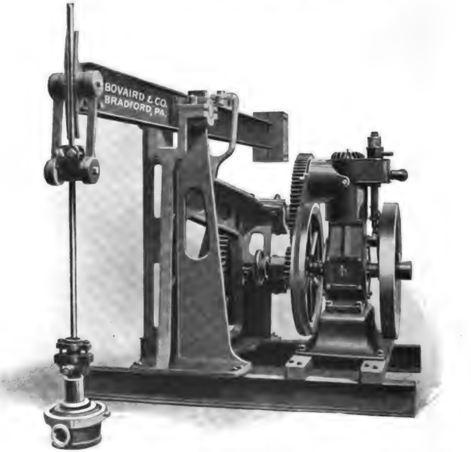

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THE INCOMPARABLE OPERATOR

....OR....

An Appreciation and Review of the Career of THEODORE NEWTON BARNSDALL

By William S. Bredin

IN THE last Saturday of the second month of the present year there passed over into the Kingdom of the Great Repose the most restless personality and one of the most remarkable men the regions of petroleum ever knew and cannot, very well, produce again. At about four o'clock on the said day the startling announcement was made by wire and 'phone that "Barnsdall is dead." In the suddenness of the event some sort of a transfiguration was wrought, for from the dust and ashes of the man, there arose a figure which symbolized the undefined and mystic realm of "Petrolia."

In the city streets, in the exchanges and the banks, in the huts of the drillers, the homes of the pumpers and in the Wayside Inns throughout the land of oil, there was much talk about the man and the event. His departure seemed to signalize the final passing of the adventurous pioneers who first discovered the subterraneous Caspian Sea of Petrolia. He was identified, from the beginning almost, with the industry these pioneers founded and was, speaking generally, the "Last of the Mohicans." It is proper, therefore, to contemplate him as the representative, the symbol of the Land of Hidden Wealth, rather than to speak of him in the phrase and terms commonly used in the surveys of the dead. He best typified Petrolia in its surprises, its virtues, it imperfections and its realities.

In its true sense Petrolia is the domain of Chance just as Bohemia is that of Youth. Both are geographically without landmarks. Petrolia, however, is material; Bohemia is spiritual. The stage of the former is an oil saturated rock; that of the latter an orientalized parlor. Both produce their special types of men. The Petrolia product is the daring and courageous Soldier of Fortune; that of Bohemia the languishing swain. Both have their uses in the economy of Nature and both are interesting.

Mr. Theodore N. Barnsdall, born July 10, 1851, died February 27, 1917, was a citizen of this material Petrolia.

Almost on the identical day in the year 1859, when the rock-impeded entrance to the then unknown land of Petrolia was pried open by the drill of Edwin Laurentine Drake—the famous operation being accomplished in the pleasant, green meadow to the south of the limits of the town of Titusville, Pa.—the name of Barnsdall became permanently and brilliantly identified with the industry thus initiated. Drake, the accidental contractor, quit the enterprise when the primal effort of drilling was completed. He was something of a Columbus, to be sure, but a Columbus blind in both eyes. Though monumented by an admirer (the late H. H. Rogers) and yearly celebrated

as an innovator, by hypnotized votaries, the staggering fact remains that Drake fell asleep at the switch of opportunity. After his slight connection with the first development, he became a justice of the peace. It looks as though the votaries are worshipping the "False One."

Such was not the case with William Barnsdall, Sr., the father of Theodore N. Barnsdall, a resident of Titusville at the time of Drake,s performance. Immediately the venture of the contractor was finished and oil was actually obtained from the rock, Mr. William Barnsdall abandoned his trade, permanently closed his shoe manufacturing establishment, flinging the key thereof away, and thenceforth devoted his resources and his energies to the new vocation. This is a rather astonishing fact, as it happened long before the hilarious cry, "Pap's struck ile," became a slogan of enticement to wealth seekers and adventurers. It proves that Mr. Barnsdall, Sr., was a man of vision. Looking beyond the little meadow he beheld the whole world handicapped in the nighttime by the flickering glow of the melting tallow candle. He realized the vast possibilities in connection with the new illuminant, and this realization—this vision rather—made him one of the world's valuable men. He has no monument, while Drake, J. P., is bronzed life-sized, upon a fountain-splashed memorial. Such is the irony of Petrolia, the paradoxial.

WM. BARNSDALL, SR., AT THE AGE OF 85 YEARS.

The vision of the father was transmitted to Theodore N. Barnsdall, the son, in due and proper form. His first connection with the industry was as a pumper on a well belonging to his father. This well was at or near Pithole, the spectacular oil town of the Venango county field. He was but a mere boy when this connection began, being, perhaps, fifteen years of age. The pay, he himself stated, was one-half of the total production of the well or wells. As crude in the Pithole days (1865-67) sold all the way from twenty dollars a barrel down to ten cents, the job may or may not have been a satisfactory one in a financial sense. It was a sort of a primary school preparation for a final career, however, and it is quite within the possibilities that Young Barnsdall learned many useful and valuable facts about oil, oil men and oil undertakings while tarrying in and around Pithole, the magic city.

Without any of the odiousness of comparison, Pithole may be said to have been the greatest oil town ever known. It was a nursery of greatness and a university of renown in its exuberant time. Theodore N. Barnsdall, perhaps, was too big and strong and active to be restrained in the nursery, but he enjoyed a fine training in the university just the same. His diploma certified that he hailed from "up the creek," which was equivalent to saying that he

knew a thing or two about oil. The term or expression "up the creek" really signified that the one entitled to the distinction was a Pithole gentleman, with all the Pithole marks and Pithole defiances. It is quite probable that young Barnsdall saw that hectic and feverish town begin with the pitching of a tent in the ravine one evening, to emerge from the mists the following morning a city of 25,000 fortune seekers, wild with hope and mad with dreams.

This city is worthy of some consideration in a tale of Mr. Barnsdall's career. Environment and atmosphere make the man, it is now generally admitted. Pithole was a daring place, profane rather than elegant. The financial debauch was the order of the day and the sensual orgy that of the night. The moral disguise was not needed there, as Pithole was without morality. Money was abundant; wine flowed untaxed, and the merry gentlemen who thronged the narrow streets of the town were not afflicted with that form of biliousness which is so often mistaken for a religious manifestation. As for the ladies —God bless them always—they were not billeted at Pithole to a "nunnery of chaste thoughts and pious deeds." These conditions eventually resulted in the production of the genuine oil-man, who, it has been often and scandalously said, can be detected from afar.

Among such men and such women, and in the midst of such doings by day and night, young Mr. Barnsdall passed the most impressionable period of his life. No doubt he was an observant boy for Pithole things and Pithole developments seemed to have been determining factors in his thoughts and acts and system of conducting affairs. To illustrate:

There was a great flotation of wildcat oil companies in the Pithole days, with fine lootings of the investors. To mention but one celebrated and legally established case, there was the affair of Col. W. D. Mann, adventurer, in which affair the soldiers of the honorably discharged and triumphant United States army, from Lieut. General U. S. Grant down to the corporal of dragoons, were stripped and spoiled of their cash by the said colonel. With nothing but a small oil lease and a long-haired intellectual contractor, Col. Mann secured from the army something like half a million dollars. The scheme failed by reason of the smallness of the lease and the inability of the intellectual contractor to complete the well. It is very easy to conclude that Mr. Barnsdall's central idea of the importance of a vast acreage as the basis of a producing venture, may have had some inception in this Mann failure. Furthermore, the confidence he always reposed in the "gentlemen in overalls" who did the actual work with the sledge and the drill may, also, have been a result due to the contemplation of the failure of the Mann intellectual field superintendent.

Moreover there were banks at Pithole and bank smashing was a pastime often. Some chaps were afraid of banks and buried their cash in the ground or hid it in the woods. The woods abounded in bandits who, by toasting the feet of the money-hiders sometimes obtained fine plunder. Hence it was just as well to have the reputation of being moneyless. Then, too, there was another side to this banking business; which was that of the kindly rescue of operators awaiting the final cashing-in of their production, for which as high as one hundred per cent was paid. This rescue feature made the banker a friend rather than a hard-hearted money seller. Any one familiar

with the Incomparable Operator will recognize the connection these facts may have had throughout his career.

Leases, the essence of the business, being hard to obtain by the man seeking them, it became the custom for operators to bid against each other. Thus the "bonus" custom originated. It was a very costly and unnecessary procedure. The untempted man with land was easier to deal with than the one with a dozen bidders at his door. From this fact came the lease-getter. One of this gentry appeared at Pithole one day with a bundle of papers covering considerable territory. He sold them for a sum about representing the expense of daily horse hire and notarial acknowledgments. The leases proved good, very good! It required a very long time, however, to develop them. Machinery and materials had to be transported a very great distance. The rock was very hard and the drilling consequently very slow. When the fluid was finally found, tanks, etc., pipelines and pumps were required, which meant more time. A rush followed the new strike and the property lines had to be protected by additional drillings. All this required credit at the banks, which was extended and handsomely paid for.

This latter case proved, beyond question that, in the very nature of things, the business of producing oil cannot be placed upon a cash basis like the conduct of a green grocery store or a millinery parlor. Hence arose the use of the judgment note, that little brother of the mortgage. It meant, however, assumption of an obligation from the very start.

No operator ever lived who realized this fact to the extent Mr. Theodore N. Barnsdall did. He perfected the use of the judgment note to a degree never before known. Debt to him was a blessing as it is alleged to be to a Nation. He seems to have been stimulated and spurred on by it. Some one has said that he was either the discoverer of a new fact relative to obligations, or else he was an artist in the handling of the same. In this line he was unrivalled.

So, taking everything into consideration, it was a very fine schooling he received in and around Pithole. When the wild town, like a scorched and wounded lion, was incinerated on a fateful August day in 1867, Mr. Barnsdall was ready to graduate with honors from the alma mater of practical operators.

He was at this time a strapping big, long-striding, powerful, good natured youth. His stature was six feet four and his weight over the second hundred. His features were strong and very good. The hair was black and the complexion clear. The soft eye could, if occasion required, flash with the fire of anger; and the low, smooth, natural voice ring forth with the overpowering vibrancy which marked the voice of Napoleon, when provocation occurred. He was full of vitality and fond of the out-of-doors. Baseball, then the newest of sports, as it is now the most popular, seems to have been his ideal pastime. The only other game he appears to have been devoted to was the mind-soothing one of solitaire. This was also Napoleon's game for relievement when perplexed and pestered. It is related that while at St. Helena he never won at it. Mr. Barnsdall, perhaps, may have had better luck. He was always lucky, it seems, and perhaps could actually get rid of the "bouquet," which means winning the game. Moreover, Barnsdall was gifted with repartee of a brilliant impersonal quality which served him well.

Thus schooled and thus equipped Mr. Barnsdall went forth from Pithole to

climb the mountain which then, as always, was before him. He was a genuine Petrolia or Pithole product, a true Soldier of Fortune as said before. If there be any moth which frets the garment of the soldier, it is a Pithole affair.

Fret that garment as it may, however, it cannot make the beauty of the achievements of the man consume away like smoke. This moth, by the bye, is mentioned in the Office for the Burial of the Dead. Hence, it may be assumed that garments, other than those of soldiers, have been fretted by it.

After the collapse of the Venango oil fields and the decadence of the Tidioute district, Mr. Barnsdall appeared in Clarion, Butler and the newly opened sections to the south where he operated on a modest scale in the 70's and early 80's. There is not very much in the histories or handbooks concerning him in these periods save that he drilled "along Oil Creek." The traditions, however, have it that he arrived at Modoc, one of the "night and day" towns of Butler county, with but fifty cents in his pockets. This is the first account of his appearing in the role of the "Moneyless Man," a role which he afterwards made classic.

William Barnsdall, Sr., was yet among men and still active in the oil business though very aged and very rich. He followed the northward trend of developments, however, and completed the first well producing oil in McKean county, the most northern field in Pennsylvania. Thus the elder Barnsdall acquired the distinction of opening up to the trade the unrivalled Bradford field. This field was unlike any yet discovered. It was a great basin of oil within the limits of which a dry hole, the oil-man's *bete noir* was never encountered. It was the first and only "sure thing" territory; every venture meant a producer and every operator made money. The paper of the oil-men became "legal tender" in the Bradford days. It was sought after by the banks.

Mr. Theodore N. Barnsdall, or "Tee-N," as he was familiarly referred to, was soon at the side of his venerable father and at once began the remarkable series of operations which, through their magnitude and magnificence, made him the most notable figure of a notable field. Securing the Quintuple tract, a vast acreage, he punched it full of productive holes. It may, or it may not have been, that here he first adopted and applied the judgment note system of meeting time conditions; the essence of this system being based upon a human factor, so to speak, to-wit; the willingness of the tradesmen such as lumber dealers, machinery sellers, etc., to act as endorsers if their own interests are benefited. The co-operative commonwealth of mutual interest was thus established.

After Bradford, which was a long-lived field, the gigantic figure of Mr. Bransdall was shadowed upon almost every hill and his footprints were found in almost every valley from Pennsylvania to Texas and from Ohio to California, where oil was produced. He was always at the front, always ambitious to drill and ever on the lookout for leases. The result of his tireless activity was, as he himself declared, that he became the owner or joint owner of more than five thousand producing wells. How many dry holes he drilled cannot be ascertained, but a conservative guess would be "over a thousand." Towns sprang up as the result of his endeavors and landowners in great numbers were the beneficiaries of operations. He was now the Incomparable Operator as well as the Great Commoner of the petroleum in-

dustry, being unrivalled in the first capacity, and closer to the men who did the actual work in the fields in the second than any of his costemporaries. During this period he promoted and successfully initiated numerous oil and gas corporations, among which may be mentioned the Barnsdall Oil Co., the Clarion Oil Co., the Union Natural Gas Co., the Pittsburgh Oil & Gas Co., Southern Oil Co., Kansas Natural Gas Co., Wildwood Oil Co., Waco Gas Co., and "several other large concerns" in coal, gold and silver mining, as the press notices modestly say. The stock of some of these corporations have more than tripled their par. In one of these enterprises Mr. Bransdall is known to have been the owner of sixty-five thousand shares, the market value of which today is upwards of ten million dollars and the yearly income from dividends over six hundred thousand dollars. This particular flotation was but one of the numerous successful ones he established and it is only mentioned here to illustrate the marvelous results achieved by the "Moneyless Man."

Following the wildcats along the famed line running 42 degrees south of west, the oil-man's favorite course, Mr. Barnsdall finally identified himself with the Oklahoma field. Here he reached his zenith and here the Soldier of Fortune met his Waterloo. The story of this endeavor is one illustrating the fact that occasionally conditions arise due to changes in circumstances which even the wisest cannot foresee or the boldest control. There are powers greater than individuals.

Securing by lease, purchase and otherwise, an acreage of approximately a thousand square miles—not a thousand miles square, be it noted—Mr. Barnsdall drilled thereon hundreds of wells, some of which were of very large calibre as producers. The outlay for drilling and other purposes approximated seven million dollars, it is said, and the results obtained more than justified this investment. Just when it looked as though the operator would triumphantly extricate himself from the realm of executions, escrows, hypothecations and re-hypothecations which had so long tracked and troubled him; just at the psychological moment of apparent triumph, a little cloud no larger than a man's hand appeared in the sky proclaiming the coming storm. There was jealousy of Barnsdall in some powerful quarters and open opposition in others. The leases, totaling over six hundred thousand acres, had been originally secured, it seems, by lease-getters for the purpose of selling rather than for operating. The land was Indian reservation land and so under governmental control. Two national administrations, it is understood, had sanctioned the tribal agreements whereby the leases were first obtained and afterwards transferred to Mr. Barnsdall, and twice had there been tribal renewals. Apparently the title was beyond question. Such, at least, is the tale as told in the Wayside Inns. A political upheaval, however, occurred and new men and new policies were the order of the day at Washington. An old, forgotten law was discovered, under the terms of which no one individual or corporation could lease from the Indians more than 4800 acres. This law was applied against Mr. Barnsdall and the acres, less the said 4800 limitation, were taken from him; he being reimbursed only for the actual outlay for drilling, it is understood. This proved a Waterloo and it is not a wild assumption to say that his unsubduable spirit was wounded by this governmental action. To the Indians he was the "Big Steam-

boat," and as such he was water-logged in the shallow streams of their last hunting grounds. Soon thereafter his rugged health began to fail and then came on the event of the last Saturday heretofore alluded to.

To relate all the marvels this Incomparable Operator wrought on the hills and in the valleys of Petrolia, would require the space of a very large book. Interesting and valuable as such a work would be it is now beyond the possibility of compilation. Like all genuine oilmen he had a most pronounced dislike for notoriety—another development of the business itself, secrecy being a considerable essential—and his lips are forever closed. It seems a pity, indeed, that the pioneers were all reticent men. The libraries are filled with accounts of the doings and the philosophies of the regional dive-keeper, Ben Hogan, and the Petrolia spendthrift, Johnny Steele; the Wayside Inns alone seem to preserve the memory of the McKeowns, the O'Days, the Carters and the Barnsdalls of the trade. The process of constant forgetfulness will, perhaps, engulf them in its oblivion, unless some Bret Harte or Walter Scott arises soon to perfect and polish the romances of the regions.

As a personality Mr. Barnsdall was as interesting as his accomplishments were dramatic. To him individually, therefore, will the balance of this poor, imperfect sketch be devoted. Around him there has gathered a flood anecdotes, equaling in human interest those to be found in the sixty lives of the holy St. Patrick, "as fine a gentleman as ever Ireland bred even if some there be who declare he never lived and others say he was a Protestant."

The Anecdotes.

Mr. James W. McKee, who was for many years Mr. Barnsdall's trusted field man in Pennsylvania, West Virginia, Kentucky and elsewhere, relates many interesting stories concerning his chief's manner of conducting his affairs and also his carelessness in money matters.

"My first acquaintance with Mr. Barnsdall," said this gentleman recently, "began somewhat in this way: I learned of a venture being drilled below the level of the known rocks and of the finding of a new sand at a great depth. I secured a handful of this sand and, without any particular design, took the same to Tee-N. He was at once interested. He felt, smelt and, in numerous ways studied this sand, using a glass and otherwise closely examining it. Finally he said to me: 'Are you sure that this sand comes from the deep well you claim it does?' I told him I was, that I myself had taken it from the last bailer run by the drillers. Again he began his scrutiny and a dozen times he repeated: 'Are you sure that this sand comes from the well you speak of?' The more I assured him, the more he seemed to be interested in the sand. Finally he said to me: 'This is an oil sand.' He then asked me if I was doing anything and when I told him I was looking for a chance to secure a permanent job, he said: 'Take the next train, and secure all the land you can, no matter what it costs, in the section. It means a new field.' This was the only authorization I had to act for him. I was soon on the ground and soon had a fine lot of leases. Before a well was actually started Barnsdall had, through me, invested one hundred and fifty thousand dollars in the way of bonus prepayments. I confess I trembled when I sat down and thought about the confidence reposed in the statement I had made that the sand shown came from the wildcat well, which by the way, never pro-

duced any oil, being an edger. I thought often that Tee-N was taking big chances on me, a total stranger to him. I knew the sand had oil-bearing markings, just as he did, but I realized that Barnsdall had no other proof of this sand coming from the particular well than my mere word. He never visited the property but once. We drilled 162 wells on the acreage I had secured, and the venture was exceedingly profitable, much to my satisfaction. I had made good and enjoyed Mr. Barnsdall's confidence.

"He was a man, as this event proved, totally devoid of distrust. He never seemed to suspect that any one was trying to deceive him, and I doubt if any one could mislead him when it came to a show down of sands. Occasionally, however, he would be carried away by his own promptings. One day a party entered his office with a proposition covering some 1200 acres located near Emlenton, Pa. It required about $12,000 in cash to secure the stuff. Without any investigation whatever, and against my most earnest protest, Mr. Barnsdall accepted the tender and by the use of a note closed the matter. The land was no good and the money was lost. The only allusion Mr. Barnsdall made to the affair was: 'Oh well, the man who brought the leases looked as if he needed the money. I am glad he got it.'

"Money was nothing to Tee-N. He did not seem to have any idea of its value. What he wanted above all things seems to have been opportunity. Life to him was opportunity and money was a mere incident. He had the genuine St. Paul contempt for the filthy lucre. He once carried a checkbook, he told me, but he soon got rid of that dangerous transmitter of value. He really did not require cash and, perhaps, was wise to be without it. He was a kindly disposed man and could with difficulty say 'No.' If he actually had to have cash he always secured it. To illustrate:

"One time, being in a great hurry to catch the last night train to New York he rushed at top speed to the depot, talking all the time about some matter I was handling for him. When we arrived out of breath at the station he began his habitual search of his pockets for the coin. The search was in vain for he turned to me and said: 'Have you any money, Jim?' I replied that I had about twenty-five dollars and tendered it to him. Evidently he concluded that I needed the funds more than he did, for he stepped over to the ticket office and said to the clerk: 'I'm in a hurry to get to New York. Give me a mileage book and I will settle with you when I return.' Without a word the book was handed to him. The same process was repeated at the Pullman car window and a stateroom was secured."

It may, or it may not have been that this trip of the "Moneyless Man," as detailed by Mr. McKee, was the noted one which resulted, during a period of financial stress and panic, in the securing from the Standard Oil people of the sum of eight million dollars, as large a transaction, probably, as was ever made by an individual. This feat staggered all of Petrolia and doubtless many a financier asked himself the question: "Upon what meat does this Imperial Caesar feed that he has grown so great?" If the curious do yet ask questions along this line the answer must be that in the grand masonry of Barnsdall's transactions he traveled on the level and acted on the square. He always made good, no matter what the reports of the Duns and Bradstreets of the day may have been. The judgment notes, no matter

how often renewed, were finally honored. Barnsdall had the collaterals.

"Talking about the note feature of Tee-N's business methods," continued Mr. McKee, "I recall one incident which is decidedly humorous. We were operating in the Butler field and having decidedly bad luck just at the time. It was necessary to secure about $1200 worth of lumber for our necessities. This was obtained all right by a note for that amount, for which we were thanked by the lumber dealer. When the due date arrived we needed eight hundred dollars worth more of lumber and five hundred dollars in cash. Without this cash operations would stop. The situation did not trouble Mr. Barnsdall in the least. He met it by merely drawing up a new note for $2500 which was sent, by special delivery, to the dealer with instructions to give me, personally, the difference, $500 in cash. This was promptly done by the merchant who expressed his gratification at the fine growth of the business between us."

These tales of financial stress, as related by Mr. McKee and verified by others, are what give pathos to the career of this kind and magnificent man. Often and often it is reported and believed that he would find himself on the trolleys absolutely without cash. This mattered not, however, as he always "arrived" as the French phrase has it. When it is considered that Mr. Barnsdall was the owner of a palatial residence, parked in the midst of fourteen acres of land in the center of the most aristocratic section of the city of Pittsburgh; that he likewise owned hotels and trolley lines, coal and gold mines, and was, in addition, the greatest producer of oil in the land, the pathos is intensified by the mystery as to how the thing itself could ever happen. The only answer possible is that "Barnsdall never thought of money."

Never! Mr. McKee is authority for the statement that on one day or season of the year he thought of gold and what it could do to cheer and comfort. This day was Christmas when, like Tiny Tim, an antithesis, the massive Barnsdall sallied forth into the streets as if "it might be pleasant to remember Him who made lame beggars dance and blind men leap." It is very agreeable to print this fact and to relate some other incidents to point the moral and adorn the tale.

When the news went forth that the operator was dead one who knew him well remarked: "A thousand meal tickets good during Barnsdall's life have today been cancelled."

On one occasion he happened to be in a hotel, no doubt one he owned himself, when a gentleman from "up the creek" bore down upon him. The newcomer was a stranger. He looked as though he had just emerged from the mud baths of the oil country roads. The barber, it was evident, had not used his strong and dextrous arms upon him for a considerable period of time, and he perfumed the lobby with the delightful odor of B. S. He extended a grimy hand to Mr. Barnsdall and said: "Will you buy me a drink Tay-N? I'm down and out and it's cold tonight." A porter was called and the wreck was led to the refreshment department where he was given fluids and solids. Finding his way back to the lobby he again accosted Mr. Barnsdall, saying: "Lend me twenty dollars, Tay-N. I'm on me way down to West Virginia and have nary a cent about me." The money was given him and off he went out into the stormy night. Some one remonstrated with the gift man for his responsive philanthropy. "That is how I secure my agents," was

the reply. "That man will make good." Some months afterwards a very well dressed, cleanly shaven and strictly sober man appeared at the Barnsdall offices. He was very good to look upon. He had to introduce himself to Tee-N who had forgotten the episode of the lobby. "Here's the twenty dollars you loaned me the night of the big wind," he said, "and here's a bundle of leases surrounding a new producer." The leases proved exceedingly profitable; the agent had made good.

Mr. Barnsdall at one time had in his employ a man who rendered him valuable and faithful services. When the Union Gas Company was established this man, being now very old and feeble, was presented by his employer with twenty-five thousand dollars' worth of the stock of the said company. During the Roosevelt panic of 1907, when the markets were crashing and the banks were refusing cash, this former employee came to Pittsburgh with the stock in his pocket and tendered it to Tee-N. It had more than doubled in value and was probably collateral for fifty thousand dollars. The tender was declined with the remark that while it would undoubtedly take care of the owner and his family, it would be but "a drop in the bucket" as compared with what the oil-man urgently needed.

At Warren, Pa., some years ago, a young man obtained a lease but lacked the money or credit to operate it. He had tried in vain at all the banks and among the local talent to secure funds. As luck would have it Mr. Barnsdall arrived in town at the moment the party was about to abandon his efforts. He was advised to consult the operator. "How can I?" he asked. "I am not even acquainted with him." Urged on by a sympathizer, he finally screwed up his courage and introduced himself, stating his object. Mr. Barnsdall listened to the story with his usual patience and when it was ended said: "You look honest, stranger, and you have the requisite nerve to get along in the oil business. You want six thousand dollars, you say? Well, get a note and I will sign it." The lease proved to be a very fine investment and the young man is now one of the richest oil-men in the Warren field.

Jim Hanks was an oil well shooter and being out of a job for some time, was up against the familiar mountain. One day in Pittsburgh a friend advised him to apply to Barnsdall. This he did. He had a scheme whereby some money might be made if he could secure the monopoly of shooting all the Barnsdall wells. To do this properly would require $1500. Without discussing the matter further a note for this amount was quickly made out. Taking the next train for Sistersville, Mr. Hanks soon "made good." He secured a large acreage in the field and turned it over to Barnsdall. Hanks died a few years ago leaving an estate of upwards of $200,000.

Mr. Barnsdall, more than once in his picturesque career, was annoyed and pestered by the delinquencies and shortcomings of people to whom he was instrumental in supplying the opportunity of employment. He seemed to be able to dismiss such things from his mind without undue effort. A typical story illustrating this phase of a speculative business is as follows:

An aged party, undoubtedly from the hayfields, was wafted into the oil-man's office once upon a time by the winds of betrayed confidence. The superanuated individual wore a beard which made the feather duster look like a piker. Inquiring for the operator, he was informed by the matter-of-fact clerk that the

last heard of Mr. Barnsdall was that he had left London, England, for Pittsburgh, via Mexico and California; he was overdue, however, and likely to be in his office any day. Thinking, no doubt that this information was of an evasive kind, the ancient citizen calmly sat himself down in a chair, saying, in his shrill voice that he would wait for the traveler even if it took several days. Money was due the stranger and money he would have before he left. As fate would have it, Mr. Barnsdall, travel-worn and fatigued arrived in a few minutes. The old man jumped up as the operator entered, and said to the clerk: "I allowed you was fooling me, young feller, but it takes a slicker chap than you to get ahead of me even if I am eighty-eight years of age. I didn't come down here to marry a girl fifteen years of age as my neighbor up at Whiskerville did last week. I came to see Mr. Barnsdall and here he is in spite of your lies." Inquiring what the trouble was, Mr. Barnsdall was very greatly surprised to be informed that a well had been drilled by himself on the property of the aged one, and that the wicked drilling people had left when the venture was completed without settling the bill for their food and lodging. Investigation proved that the story of the Whiskerville denizen was true. Becoming interested in the visitor, Mr. Barnsdall entertained him for several days in his palatial home and finally sent him away in a cheerful mood. "I only wish I could have the law on you for an unpaid board bill every week," said the old man as he said farewell. This story well illustrates the vastness of Mr. Barnsdall's operations, and how he was victimized by the practices of people whom he never knew. It is also typical of his journeyings. Three-quarters of this operator's time was spent on railroads and on other means of conveyance. Like the author of "Home, Sweet Home," he was virtually homeless and knew little of the comforts of the palace he had built.

One day he was stopped on the street by a lawyer of pettifogging repute who apologized for a law action in which the operator figured as defendant. Looking at him with undisguised contempt Mr. Barnsdall said: "I am glad you sued me. Do the same every chance you get; let widow women and children alone."

A banker is authority for the following: Having occasion to call on the operator, he found the latter in great good humor. "This has been a very fine day," he said as he greeted his caller. "I have realized to the extent of fifty thousand dollars today. You know that Texas corporation I have bothered about for the last five years? It is in good condition at last, after all my troubles to get it on a paying basis. I have just returned from the bank. They gave me credit for forty-nine thousand nine hundred and ninety-nine dollars on my holdings. I always felt that venture would turn out good." The banker congratulated him and then, by the way of playfulness, said: "But how about the other dollar?" A search through the pockets followed the inquiry. A neatly folded dollar bill was finally fished up and the operator said: "Here it is. I borrowed it for lunch; which I forgot to stop for, being in a hurry."

Lunch, dinner, refreshment! Barnsdall was too preoccupied to spare the time for repasts. His usual sustenance was a sandwich, eaten often as he hastened along the street, and as for stimulants a sip of brewed malt was his limit, he being a very temperate man.

Becoming interested in a newsboy, Mr. Barnsdall educated him. He is now a

successful business man in Idaho. Commenting by accident one day on this matter he remarked: "Well, some people say I never did anything worth while. Just the same I got that boy off the streets and out of the ditch."

Some one had drilled in a freak gusher in a new field. This well was purchased outright by Mr. Barnsdall without his having seen it. The price was above the hundred thousand. The transaction was a losing one to him but it benefited greatly divers interested parties. Finally, on a very rough day he appeared at the well, bringing with him a wheezy and decrepit old man. The well was fenced in. As some one said: "Tee-N didn't mind the fences—he just stepped over them; nor the mud in the roads—he jumped across them, carrying the old man in his arms at the same time." This antique was placed in full charge of the freak with ensuing trouble to the gentle pipe line men. The caretaker knew nothing about machinery. He did everything wrongly. With lurid language—oh, such "langwiches," as old Gus Williams was wont to say—the pipeliners reported the matter to their superintendent, threatening to strike if the incompetent was not run off the lease. "No use, boys," said the superintendent, "no earthly use in striking. The well belongs to Barnsdall and it's a freak. You'll have to stand for two freaks in this d—d soda fountain pool. That man did Barnsdall a service at some time or other."

As Mr. Barnsdall, individually and through his allied interests, was the "First Chief" of an army of at least six to eight thousand men, the freak well tells very aptly the story of what he must have endured in the way of "securing competent help," a subject much talked about in divers circles just now.

The last active participation in oil undertakings by the operator is signally illustrative: Some young men, devoid of resources, had secured a lease adjoining an old pool with which Mr. Barnsdall was familiar. They tried in vain to secure funds to begin operations. No one would give them credit and they were in their last ditch when it was reported that Mr. Barnsdall, just recovering from a hospital operation, was in Pittsburgh. He was approached and the matter laid before him in all its various details. "I know that section well," he said. "It is played out. Personally I do not think your lease is worth the paper it is written on. However, I'll furnish the funds and carry one-half of the working interest. You boys deserve encouragement." This well is now producing more than one hundred barrels per day and is, no doubt, the largest in the state of Pennsylvania at the present writing.

A new bank was established somewhere in the regions, and before its doors were even opened Mr. Barnsdall had negotiated and secured an accommodation of $25,000. Some one hearing of this remarked: "The man of the seven league boots wasn't in it with Tee-N. The regulations are suspended when he hits the road."

Being in Texas on a certain occasion he was presented with a bill for protest fees covering certain neglected notes. The average fee was fifty cents per protest as against three dollars in the old field. As he paid the claim he remarked: "I could get rich by doing all my business down here in Texas."

The banker alluded to tells another humorous story. Entering his office he found Mr. Barnsdall with a number of checks in his hand. He was exceedingly indignant. By some oversight or carelessness they had been drawn on the

wrong banking institution and had been returned unhonored. "Some one has been taking liberties with the pens and inkwells in my office," he almost shouted. "I'll stop this business right now. I'll make flag poles of the pens and hang them out of the windows. The inkwells I'll turn into lavatories for bank messengers."

Mr. Barnsdall had in his employ at one time a party whose reputation was that of looking out for his own interest in all transactions initiated by the oilman—that is he insisted upon a "rake off." This was reported to Mr. Barnsdall by some aggrieved person. "The man is a grafter" said the informant, "and I often wonder you never found it out." The reply was: "You are not telling me anything new. What you say is a fact I have long known. I keep that man in spite of his practices because he produces results, and it is results I am striving for." A thousand wrongs, of course, will never make a right, but this illustrates once more what has been maintained all through this endeavor, to-wit, that "conditions make the man" and he who adjusts himself to conditions generally "arrives."

Another individual of poor practices and general instability secured Mr. Barnsdall's participation in a venture which required the outlay of some cash. The amount was given in the usual way and the paper was realized on by the party in question. Immediately this was accomplished a fine spree was begun which only ended with the exhaustion of the cash. This done, the individual applied for work, saying he owed the oilman money and wished to work it out. The audacity of the procedure had its reward. The man was given a good position and the debt discharged. Thousands of similar incidents, doubtless, could be related of the operator.

There are many kinds of bankers, of course; some being pleasant to deal with while others of the "man-skinning" type are not so agreeable. The oil regions have known all varieties in this vocation. Mr. Barnsdall could adapt himself to the peculiarities of these money dealers without much effort and often, with humorous rejoiners, escape unharmed from the traps prepared for fund seekers. A certain squeezer, thinking the operator was in his power, threatened to dispose of divers collaterals held in escrow on some transaction or other. "I'll have to sell the securities" was the ultimatum delivered to the oil man in a rasping voice. "Go ahead," was the response, "if you can sell that stock you can do what I cannot do myself. I'll give you a fine commission if you actually make a sale." Needless to say the young "Daniel" did not come to judgment in this particular instance.

But it was not the habit of Mr. Barnsdall to swagger upon the Rialtos and there like some playful Antonio, whose "argosies were yet in peril upon the deep" take liberties with the beard and gaberdine of Jessica's gold-ladened sire. Not at all! He knew better how to deal with the tribe. One day an obligation totaling a million, so it is reported, fell due and had to be met. The available credit against this maturity was about six hundred thousand dollars cash. "Make out a check for the million" said the operator, "and I'll hustle around for the difference." Before the voucher arrived it was met. The Incomparable was not of the surrender variety. That the banks were in the habit of closing before sunset was, perhaps, some relievement to him.

In another way this mountain-climber

had his perplexities. All his promotions were not of the rapid result kind—that is to say some of the pay rolls were easier to make out than they were to discharge. One of these companies, now on a fine basis, met with such disasters at a certain period in its history that the paymaster only appeared once a year. Apparently this mattered little to the employees who went on with their daily tasks without complaint. "Barnsdall will make good" was the only comment. One of their number, however, being a new hand in the industry, took it into his head to collect his arrears. Visiting the ever-open office of the operator he was about to make a demand, when in came a lad leading an old blind woman by the hand. Mr. Barnsdall, finding his pockets empty as usual, took up his hat and going through the adjoining offices soon reappeared with a supply of coins. The unpaid pumper himself flung in his mite and went away with the remark that "there are worse things in life than missing a pay day or a dozen of them."

Though a great entertainer in his own palatial home, Mr. Barnsdall was not disposed to either accept or intrude upon the hospitality of others. A New Yorker tells the following: "I had been greatly benefited by the numerous operations of Barnsdall. He had drilled a wild-cat well adjoining some property in which I was interested. This well proving a producer had enabled me to dispose of my interests at a satisfactory figure; otherwise this would not have been possible. By accident I sauntered into one of the New York hotels and there met the operator who was diverting himself by watching the base ball score which was being reproduced, play by play, by an automatic machine. Insisting upon his coming to my club for entertainment and refreshment of the bird and bottle kind, which I felt he was entitled to, he excused himself and asked me to remain with him for the afternoon. This I agreed to, insisting upon being the host. Calling the waiter I ordered champagne and lobster. This was likewise declined with the remark that Wurzburger and a sandwich would be more enjoyable. The total outlay for the afternoon was about a dollar or, perhaps, a dollar and a half. When parting time came, Mr. Barnsdall expressed his satisfaction and said: 'You have given me a royal time, a regular round of pleasure. When you come to Pittsburgh bring your bag and baggage out to my house; stay a month or so. I would like to even up.'"

As the oil industry is about the only division of human industry left, in its field feature at least, in which a youth without funds has a chance to make good, it is easy to realize what the honorable discharge of this "Soldier of Fortune" may mean. To him Life was Opportunity and the Oil Industry a Mission.

Finale.

The story is told. It is not an obituary nor a eulogy, being rather a contemplation and study of a marvelous and many-sided personality who did much for others and, perhaps, little for himself. His way was a rough one; he was in the mud and mire of the oil saturated fields oftener than on the smooth paved streets. He did not live for gold and yet he was a great wealth distributor. Some there be who say that, after all, the life of this man was a failure; and others who declare that had he but possessed the veneer and polish of a collegiate preparation he would have been one of the most noted men of the country. To the first the reply would seem to be that Mr. Barnsdall was an instrument for the enrichment of others rather than for his

own personal aggrandizement and, therefore, his life was a great success. To the latter it may be rejoined that while it is very true that he did not occupy the top of the mountain, that he did not get the "place" reserved for the accomplished man, nevertheless, any other training than he did receive in the Petrolia of his activities would have crippled and halted him.

He succeeded in many ways. His estate is a very large one and the "estate total" is sometimes taken as the final standard of measurement of men. Silver and gold he did not carry about him, but he had something more valuable than gold or silver and that was the reputation of being square. As to the matter of attaining the summit, what counts that in comparison to making the path smooth and easy for others?

After all, what is life? Whether it is a mere temporary expression of ceaseless existence constantly changing and eternally perfecting itself, or an involuntary preparation and approach through harsh human experience to the goal of final annihilation neither the inspired nor the wise can say, let them bluff and bluster as they please. This only is true that "we come like water and like wind we go." As the Incomparable Operator came, so came we; and as he went so will we go; his fate will be our fate and his judgment will be our judgment.

If there is a perpetual reunion in the realms of spiritualized life, as we all hope there is, the Soldier of Fortune will be assured the place he deserved and will enjoy the success he entitled himself to while tarrying in Petrolia.

SCENE ON THE FAMOUS BENNINGHOFF FARM, OIL CREEK, 1865.

GETTING THE GLENERTON LEASE.

By Margaret Mitchell O'Hara.

WUZN'T ther' nobuddy here this mornin' t' see about leasin' th' farm, ole woman?" His potato-laden knife poised in midair, farmer Glenerton anxiously awaited his wife's reply.

"No," was the listless response; "nary a one an' I sure'm proud we're shet o' them leasers at last. Most uv 'em must know by this time thet you're dead set agin leasin'."

"Well, jest the same, don't you fergit t' send 'em out t' the field, er call me, when any uv 'em comes," commanded her husband. "Some o' these here days, somebuddy'll offer me decent terms an' then I'll give *him* a lease."

"Decent terms?" repeated his wife, her tone dubious. "What 'ud you call decent terms, Adam?"

"Thet all depends, ole woman—thet all depends. Jest you don't fergit t' call me," and, wiping his mouth on the back of his hand, Adam Glenerton rose from the table and returned to the harvest field.

For more than a year a small army of oil men had been trying to get a lease of the Adam Glenerton farm, southwest of Augusta. Bonuses, varying from five hundred to ten thousand dollars, had been offered the stubborn farmer, who delighted in "baiting" the leasers by pretending to consider each proposition for a period of time, ranging from one day to two weeks. The exorbitance of his requirements and demands was cunningly proportioned to the eagerness of the leaser or the financial reputation of the company which employed him. Operations to begin in thirty days; five completed wells the first year; and from one-sixth to one-third royalty—these were some of the conditions under which he *might* be induced to sign a lease.

Chief among those who laid siege to the erratic Adam, in the number and persistency of his effffforts, was the indefatigable Bob Baxter. He had called the oftenest; he had offered the highest bonus; he had consumed the most "gray matter" in an endeavor to formulate an agreement which might be comparatively satisfactory to himself and wholly satisfactory to Adam. But all in vain; and finally, discouraged and disgusted with the unreasonable "hay-digger," Baxter ceased to importune him for a lease—the others had withdrawn long before.

But now the farmer began to be uneasy. A well was being commenced on his neighbor's farm and this most surely rendered his more desirable. As the days went by and he was still let severely alone, it "got on his nerves" and early one morning he drove to Augusta and caught the west-bound train on the 'Frisco, his destination, Wichita. Upon his arrival in that city, he went directly to the Eaton Hotel, where he made inquiries of the clerk, concerning Mr. Baxter. When informed that Mr. Baxter was at breakfast, Glenerton proceeded to make himself comfortable in a big, upholstered chair and waited. As Baxter came down the steps from the dining

room, Adam promptly nabbed him.

"Say, Mr. Baxter," he began, "what's the reason you don't never come over our way no more? You know they're startin' t' bore close to me, don't you?—on Eb Tucker's quarter."

Baxter could not repress a smile at the obvious anxiety in the other's voice.

"Have they started to drill on Tucker? They must be rushing the work. But I've a good contractor there. Have a smoke, Mr. Glenerton?"

"You!" gasped the astonished man. "Air *you* drillin' on Tucker, Baxter? Well, I'll be durned!" Then the power of speech seemed to fail the dazed farmer and in silence he walked beside Baxter out of the hotel. However, he soon rallied.

"You'd orter t' hev my lease now, Mr. Baxter, don't you think?" he said as they walked along. "I've been a-thinkin' it over an' I b'lieve I'm ready to lease."

"All right, Mr. Glenerton," responded Baxter, briskly; "I'll give you fifteen thousand dollars cash bonus and one-eighth royalty, a well to be commenced in thirty days. How do those terms suit you?"

Again Glenerton was temporarily deprived of speech, but his mind worked rapidly. "Fifteen thousan' dollars! Gosh!" he thought. "He must want thet there lease mighty bad." The amount named was far beyond his expectations, but so great was his cupidity that immediately the unexpected seemed likely to become a possibility, the margin of his desires widened.

"Well now, Mr. Baxter," carefully choosing his words, "thet's a good offer, but—" with a sidewise glance at the inscrutable face of his companion—"couldn't you raise thet jest a thousan'? You see—"

Baxter stopped short and faced him. "Mr. Glenerton, you and your farm can go straight to hell! I don't want it," and turning abruptly, he strode away, leaving the chagrined farmer gaping helplessly after him.

A week later, as the drilling crew on the Tucker well was changing tour at midnight, one of the "toolies" called the attention of the others to something skulking in the shadow of a small shed near the derrick. As they watched, a man was seen to slip around a corner of the shed and run across the field in the rear.

"Foller him, Dick," directed one of the men, "an' I'll see what he's been doin' around the shed."

Dick obeyed. Later, he and his fellow worker compared notes with the result that Bob Baxter in Wichita was called to the telephone early the next morning and in two hours' time was again on the scene. When he had talked with the men on tour, Baxter again called on Adam Glenerton, whom he found in a field near his house, ostensibly engaged in breaking ground for fall wheat, but in reality sitting on the plow handles, staring abstractedly into space while his team dozed in their harness. Baxter, directed by the apathetic Mrs. Glenerton, had almost reached the farmer before he was observed. Glenerton's nervous start and the pallor that showed through his tan were not lost on the keen-eyed Baxter. The latter wasted no time in preliminaries.

"Mr. Glenerton," he began, "I want your lease. Here is a blank I have filled out ready for you to sign." He handed the document to the obviously agitated man, who made a pretense of reading it then demurred:

"I hain't got my specs out here, Mr. Baxter."

"Then I'll read it to you," and Baxter read aloud from the prepared blank. There was no bonus mentioned, no well promised and but a nominal rental. The life of the lease was to be ten years. Glenerton listened in open-mouthed, wide-eyed indignation. When Baxter paused, he burst forth:

"Damned ef I'll sign no such lease ez thet. W'y, they aint a cent o' bonus—you aint bound t' bore, never, an' only a rental uv twenty-five cents an acre! No siree! I'll—"

"Mr. Glenerton," Baxter broke in, contemptously, "you'll sign this lease or take the consequence of refusal. You were watched and followed last night. The burning fuse was stamped out before it had done any damage, but the law takes account of intentions. Will you sign now?"

And Adam Glenerton signed.

New Publication of the
West Virginia Geological Survey

There has just been issued from the press a very important and interesting publication by the West Virginia Geological Survey, Morgantown, W. Va. This publication is described in the following extract from the printed circular of the Survey and the reader is also told how to secure the same:

(26) *Detailed Report on Jefferson, Berkeley and Morgan Counties*, comprising the Eastern Panhandle of the State, by G. P. Grimsley, issued under date of December 30, 1916, containing 644 pages + xxvi pages of introductory matter, illustrated with 37 half-tone plates and 20 figures or zinc etchings in the text, one of which shows cross-sections of the geologic formations, and accompanied with a separate case of topographic and geologic maps of the entire area, also a separate map showing the belts of pure limestone. This area contains vast deposits of the purest limestones in the country as also immense deposits of pure dolomites and vast quantities of glass-sands, besides many other valuable and interesting mineral deposits, numerous analyses of all of which are given in the volume. Price, including case of maps, delivery charges paid by the Survey, $2.50, but for combination price with other publications, see general circular. Extra copies of geologic map, $1.00 each, and of the topographic map, 50 cents each. West Virginia Geological Survey, Box 848, Morgantown, W. Va.

STEUBENVILLE, ON THE OHIO.

A Buckeye Town Still on the Oil Map.

By Our Peripatetic Scout.

IN A SENSE, Steubenville is as old as the hills, as it dates its origin back to the days when the Indians' canoes, plied by dusky warriors, sped over the bosom of the broad river. The town has approximately thirty thousand of a population with diversified industries, the La Belle Iron Works leading in the number of men employed and in finished product. Connected with the world's markets by a ship waterway and steam railroads and with both natural gas and coal for fuel, this old, staid Ohio River city is gradually expanding as a commercial center.

Though in the minority class as an oil producing section of the state, a number of prolific pools have been found within a radius of a few miles of the town in the past that are still producing. It having lately been discovered that gas from this territory is rich in gasoline, a number of small plants have been installed for the purpose of extracting this valuable product from the aforementioned fluid.

The first well in Jefferson county that produced oil in a commercial way was drilled on the J. L. Blackburn farm on Island creek. Coincident with this, when Mr. Blackburn received his check from the Standard Oil Company in payment for his royalty, he had some trouble in getting his bank at Steubenville to cash it, on the ground that the company was not known to the bank and they did not feel like taking the risk. It was finally paid, Mr. Blackburn assuming all responsibility. We are all after Standard checks now.

The first field visited by the writer is located six miles up the river from Steubenville, near the mouth of Island creek, a turbulent stream flowing down through a chain of broken hills. On this trip I was accompanied by J. E. Blackburn, of Blackburn Bros., contractors and drillers, operating in a lately discovered pool one mile from the stream's confluence with the river. A fine dirt road skirts the winding stream, the highway being cut to a grade, something unusual for this section. I was informed that many years ago a number of farmers owning land farther back in the country becoming desirous of connecting a number of the back townships with the river by a railroad, took it upon themselves to build one. Seven miles of grade was completed when their money gave out and so ended the story as far as they were concerned and it is not at all likely their aspirations will ever be realized. Later the grade was taken over by the different township authorities and Island creek has one of the fine driveways of Jefferson county. One mile of travel up the picturesque valley are a cluster of cottages, where reside a number of oil field men and mill workers with their families.

After a hunger satisfying meal at the home of Mr. Blackburn, I accompanied him up a steep mountain trail to a drill-

ing well, from which point you could see through a rift in the hills the bald top of a high elevation far back on the West Virginia side of the Ohio river.

Steel derricks are very much in evidence in this section. Owing to the scarcity of timber, concrete has begun to play a noticeable part in the foundation for derricks. My attention was called to this by Mr. Blackburn. The mudsill and foundations in general were concrete and gives good satisfaction. The work of construction in this field is under the supervision of C. T. Miller, a veteran rig builder, who has followed this branch of the oil producing business since the opening up of the Scio pool in Ohio, or from the time he was 19 years of age. Mr. Miller claims that a foundation of this material put in right will last until Gabriel toots his bugle.

While in the field the boys shook hands with were A. C. Morris, tooly for the Blackburn combination, with 17 years' experience; Norman Blackburn, driller, who has handled the screw for 15 years, and J. S. Elson, tool dresser. This, with Ollie Blackburn as head teamster, comprised the operating outfit of the Blackburn aggregation, working for the Dean Oil Company.

Other field workers of the hills were Ed. Elson, Russel Maur, Field Foreman O. R. Elliott, Lon Peneyck, J. W. Dickinson and George Rawson.

Follansbee Cove.

Two miles south of Steubenville is located the village of Follansbee Cove, that sprung into prominence a few years back by the discovery of oil. Though production is limited to a small area, it is a paying proposition, the manufacture of gasoline being the principal feature of the Ferguson and Jennings oil companies. The La Belle Iron Works also holds valuable interests, the gas from their property being pumped from the field to their plant in Steubenville.

At Holliday's Cove, where the discovery of another pool caused the once small hamlet to grow until the citizens began to put on Pittsburgh airs and turn up their noses at a little place like Steubenville.

Within the past three years two gasoline plants have been installed. This, together with a few tanks of oil gathered as the fellow said, "betwixt years," gives the place an oil coloring.

At Wierton, where you leave the trolley for Holliday's Cove, is the main office of the Ferguson Oil Company with F. W. Ridgley as head bookkeeper, who is well versed in the oil business, filling positions of more or less clerical nature for a decade or more.

Twenty minutes' walk from the office brings you to the field proper. Properly speaking the field could well be termed an oil pocket. A visit to the gasoline plant had been planned and the date was filled. The plant belongs to the Riverside Oil Company, with J. L. Boarman as engineer, with long years of service to his credit. J. B. Dobson, formerly of Forest county, Pennsylvania, is assistant engineer of the Wellsburg district which includes four gasoline plants. H. H. Yonally was also met.

On the home trip a stop was made at the company's tool house where Frank Ferguson was rounded up and his name added to the long list of subscribers for the Oil and Gas Man's Magazine. Mr. Ferguson is a long time member of the oil men's denomination, starting in at Knapp's creek, Bradford field, and following developments down to West Virginia, being for the past seven years with the Ferguson people. Ferguson said that to the best of his knowledge while en-

gaged in wildcatting he had never denied being married.

For eight long years A. H. Higgins has been on the company's payroll, missing one day's work in that time. This speaks mighty well and we attribute it to well cooked victuals, Mrs. Higgins having the reputation of being superfine in this line.

THE MURPHY & MURPHY IRWIN PLANT.

A few minutes' stop was made at the Murphy & Murphy Irwin gasoline plant, where L. L. Chambers was found in charge. Mr. Chambers was born at Farmington, Butler county, where he labored in the oil fields for a season, then migrated to West Virginia, making Mannington headquarters during the early excitement. Severing his relations with the Penn Gasoline Company, after a period of seven years' service, he took the position he now holds. Isaac A. Tanner, of Marion county, Ohio, with long years of service in the oil fields, is an employee of the Murphy & Murphy Company.

MISCELLANEOUS.

R. H. Croy, superintendent for the La Belle Iron Works' oil and gas interests, was born in Mercer county, Pa., moving with his parents to Pithole when two years of age. Engaging in oil field work at an early age, he has figured in most every strike of importance in the Pennsylvania and West Virginia fields. Recognizing his worth, the La Belle Iron Works Company engaged his services of which company he has become a permanent fixture.

Edward McDonnell's first meal was eaten at Amsterdam, N. Y., Ed. being loth to tell the year. Eleven years ago he and a number of kindred spirits formed the Ben and Baker Oil Company, and leased a block of territory near Homeworth, drilling 32 wells, which have yielded the company over 100,000 barrels of oil. The company is composed of Steubenville men, with Mr. McDonnell as president.

John McMillen is a link between the past and present. Commencement day with him was on the Tarr farm, Oil Creek, September, 1864, at filling oil barrels at three cents a barrel. As Mr. McMillen will contribute an article in a future number of the magazine, we will but mention that after fifty-three years of service he carries his years lightly.

Among those met on the trip down the Ohio who are interested in production and workers in the field were H. S. Peters, contractor, and who is interested in the Burgettstown development; McFeel Bros., who have opened an extension of the Yellow Creek pool by striking a fair producer one mile ahead of production; C. T. Widger, who has rounded out eight years with the Ferguson Oil Company; P. S. Vanderlin, of Clintonville, Pa., who has been engaged in hunting the fluid since boyhood; A. T. Zeigler, well known in oil circles; A. J. Barber, who has followed the trail for long years; John Bishop, one of the invincibles; R. A. West; H. C. Kellermire, a long time operator and all 'round good fellow whose friends are legion among the oil fraternity; A. T. Smith, an old-time producer.

RANDOM RECOLLECTIONS.

By Charles R. Wattson.

THE RECENT DEATH of Colonel William Frederick Cody (Buffalo Bill) at Denver, Colorado, at the age of 72 years, recalls to memory, of the writer, the great scout's first visit to the oil country in the role of an actor and promoter of a theatrical enterprise. His appearance at Petrolia, Pennsylvania, the latter part of September, eighteen hundred and seventy-seven, presenting "Buffalo Bill's Last Shot," was heralded as a great event.

I was employed by the United Pipe Lines Company, as telegraph operator, at their main station, located at Argyle, one half-mile from Petrolia, down the Parker and Karns City narrow gauge railroad, although the intervening space was well built up with regulation oil country one-story dwellings, sandwiched, as they were, between numerous oil wells, the gas lights from which gave a pleasing picture to the surroundings. Houses, pump station and wells have long since passed away so that the memory of their ever having existed is only in the minds of a few.

As a very young boy I became interested in the achievements of Buffalo Bill through reading "Beadle's Dime Novels." These little books, with their covers of flaming colors and tragic pictures were placed under the ban by paterfamilias and they had to be smuggled in and read surreptitiously (usually in some sequestered spot in the barn or other out-building). While crude and exaggerated to a large degree yet they carried with them a foundation of truth from the fact that Buffalo Bill was the personification of a brave spirit that did win the west from the savages; that as a very young man there was embodied in him all the daring and heroism and chivalry of all the plainsmen combined. This knowledge absorbed from this source in boyhood, of this daring hero of almost legendary proportions still lingered with me in youth and the desire was great to see this wonderful man in flesh and blood.

As I was coming down the long steps that led from the little building perched on the side of the hill, which served the purpose of both office and sleeping quarters, to the railroad track (the narrow gauge road was a general thoroughfare for the suburban residenter) on my way to town for the show, there loomed up in the misty atmosphere a tall, well built figure, and when near enough to become distinguishable I was pleased to recognize my old friend, "Stop-Cock" Jim Cunningham. He was dressed in his usual picturesque style, consisting of a long Prince Albert coat, broad brimmed hat, white shirt adorned with a large flowing black necktie. His face, as was its custom, was illuminated with a genial, impressive smile; his whole personality was one of satisfaction and agreeableness that was very pleasing.

The sobriquet of "Stop-Cock Jim" had been applied to Cunningham some years previous to the time of which I write and so he was known in pipe line circles from one end to the other of the then limited oil country.

The interesting story, under the caption of "Stop-Cock Jim" from the facile pen of C. H. Oliver, first published in this magazine some five years ago and then republished two years later (on account of the great demand for the story) has the honor of having had the largest sale of any short oil story ever written. The old subscribers, of this periodical, will no doubt recall the circumstances that gave Jim his nickname, but it will not be out of place to relate it again in a summarized form.

At Pleasantville, Jim was employed by one of the early pipe line companies in various positions. He performed the duties of engineer, telegraph operator and gauger and at the time he received his fanciful appellation was acting as foreman of construction, a recent promotion. One afternoon there rode hurriedly to the station an excited contractor with the information that his company had struck a big well and must have it connected at once or a large loss of oil would occur. Jim was not long in getting into action but when he came to take a mental inventory of his stock of pipe was dismayed to find that the last shipment of pipe contained no collars. This was a dilemma of some consequence and one to cause thoughtful application of mind; what would he do for connecting links to join the pipe? He made another and closer examination of his stock and found that he had about 150 stop cocks on hand. Here was the solving of the problem, he would use them in the place of collars. By midnight the well was connected and the oil was rushing through this uniquely constructed line into the pipe line tanks.

When the superintendent, at Titusville, got his report the next day he was greatly pleased at the ingenuity and thoughtfulness displayed by his employe and sententiously remarked, "that's what I call pipe lining." So Jim received a new baptism and the name "Stop-Cock Jim" has come bounding down the stairway of time and will always live in pipe line parlance.

My acquaintance with this unmatched product of the oil regions had been of some months duration previous to the time of which I write. He was employed by the Union Pipe Line Company, as guager, their station was just a short distance from the United station and I came in contact with him almost every day. He was a man of mature years while I was still in my teens and he took a friendly interest in me. Always helpful with good advice, especially warning me to avoid wine, women and gambling the "bete noire" of the youth, in the natural and simple state, who drifted into the wicked oil regions.

Jim was a man of genial temperament, keen in witticism, of imposing stature and strong as an ox. He was afraid of nothing in this vale of tears. His life had been replete with stirring events which made him laden with material for some of the most amusing and dramatic occurrences seldom falling to the lot of one man's experiences. My association with him had enlisted in me a regard, that had woven a web of fancies around him, to such an extent that his prowess was equal, to my mind, to some of the greatest heroes.

Jim had more than once played the part of the "Good Samaritan" but his greatest act of humanity occurred when the small-pox broke out in his neighborhood and some twenty cases soon developed. Old Dr. Dennison was in charge of the patients and had difficulty in getting nurses. Jim volunteered and was so successful in his nursing that only one case was lost.

After exchange of greetings we walked with rapid strides, our heels making a rythmic sound as we measured our steps to conform with the uneven distances of the separated ties, which soon brought us within the business section of the town, where the first episode of the evening was to occur that would place my companion still higher in my esteem by his clever, brave and skillful discomfiture of an unscrupulous enemy.

On this particular night I learned with regret that on the following day Jim would strike out for pastures new. The opinion had become prevalent that Butler county was worked out and the exodus to the northern country (Bradford) had become general. The big operators were pulling out wells and shipping the stuff to the new Eldorado. How little they thought that, seven years later, the old county would produce the greatest white sand pool ever developed and that the town of Butler would be the centre of oildom for several years, or until McDonald, with its mammoth wells, completely overshadowed it.

As we passed up Railroad street and came opposite the Palace beer garden we caught a glimpse of the inside of this famous place. The evening's business had fairly started, numerous girl waiters were flitting about with trays covered with glasses filled with foaming beverages and the sound of a violin could be heard as it was being tuned up for the cabaret dance that was soon to follow.

Just then a massive, gum-booted, flannel shirted figure shot rapidly through the door and observing us sang out to Jim: "Hey, what's yer hurry? Wait a minute." Jim turned, gave him a quick look, then calmly said to me: "Get on the other side of the street until I see what this fellow is after. Evidently he is seeking trouble."

To say that I was frightened would but fantly express it for the reason that only a few nights before a driller named McCann had been done to death on this same street and the murderer had never been apprehended.

Jack Naley, who now approached Jim, was a big husky fellow, about as tough a specimen of humanity as one would want to meet in a rough and tumble fight. He had liquored up some which made him a little reckless at this time.

Without any intimation of his purpose or preliminary words before opening hostilities he made a terrific drive with his right arm full at Jim's face. The latter was not to be caught napping, however, and with a quick movement of his head and a side-step the blow landed upon the air. Naley missing his objective point was nearly carried off his feet and before he could recover his equilibrium Jim's long arm shot out as if propelled by steam, catching his antagonist squarely on the jaw sending him down for a hard fall. It was, however, not a knock-out blow and Naley was on his feet again almost instantly and with a savage oath made a rush like a wounded bull. Jim again showed his superiority over his foe by cleverly avoiding him and at the psychological moment his right again shot out with lightning speed landing with terrific force between Naley's eyes putting him "horse de combat" and the fight was over.

As the crowd began to gather we quietly pressed through it and soon gained Main street.

As the attack was unprovoked and seemingly without cause, Jim related the circumstances that led up to it as we went along.

It seems Naley had been pumping some wells in which he owned an eighth interest. As gauger for the Union Pipe

Line Company it was the duty of Jim to run this oil into their lines. At this time there was no systematic way, as now, of detecting a shortage caused by thievery at a well. The whole matter was left to the gauger and it was part of his duty to see that he got all the oil he issued tickets for; this could be done only by checking his tickets with the amount of oil received at the station. Jim had been running short, and his suspicions fell on Naley, so he determined to lay a trap for him.

One day he turned on Naley's tank, after measuring same, and then started ostensibly for another well, as had been his custom. Instead, however, he made a rapid detour coming up back of the boiler house where he had a good view of the tank. Naley was caught red-handed in his act of transferring oil from the tank to the well by an ingeniously arranged connection which he would afterwards pump into the receiving tank. In this way a goodly portion of the oil in each tank would be held at the wells that should have gone to the pipe line company.

While the offense was criminal in nature the company, on account of the innocence of the other owners, permitted them to adjust the matter by a reasonable indemnity and the discharge of Naley, who was compelled to dispose of his interest at much less than its value or suffer the consequences of his act. Hence his enmity towards "Stop-Cock Jim."

As we neared O'Donnell's hotel, Jim stopped and said: "I will now have to leave you as I have been appointed a committee of one to prepare things at the club for an informal reception to be given 'Buffalo Bill' after the show is over. You know," and there came into play a pair of eyes that kindled brightly, seeming to laugh at you without any apparent relaxation of the facial expression, "Buffalo Bill is very fond of a western game known as 'bucking the tiger' so I am to prepare the animal," and again that twinkle in the eye, "so that he will be in good trim to give the distinguished guest a hearty greeting."

And so we parted never to meet again. I did not hear the story of the "reception" given Buffalo Bill for a long time afterwards and then the words playfully spoken by "Stop Cock Jim" came back to me full of meaning.

When the oil crowd flowed over into Butler county, from Parker's Landing, the first new town to spring into prominence was Petrolia. It came up like a gourd in the night. "Ben Hogan," who was always in the van when a new oil town was to be established, was conspicuously present. He soon had his Castle, that afterwards became notorious, in operation. At this time he conceived the idea of putting up a building for legitimate purposes to be used as a hotel and opera house. This building, according to Hogan's own story, was completed and ready for occupancy in 30 days, a most remarkable achievement when it is understood all the material had to be hauled from points ten miles distant.

One would have to draw strongly on his imagination to have this sleepy, almost forsaken village as it appears today builded up in memory as it was on the night of which I write. Everything was in gala attire, the streets shone brightly under the glare of the huge torches pouring forth natural gas with reckless prodigality, revealing a typical oil town of hemlock boards, sans architecture, sans paint, sans everything except good cheer which ruled abundantly.

Arriving at the opera house I found hundreds being turned away, with the

building packed to suffocation. Determined to see the show I managed to reach the heavy double doors that had been swung open to admit air as the evening was warm. Standing beside the doors was a brawny, friendly driller who gave me a boost to the top of one of the doors and there from that uncomfortable pinnacle I witnessed the performance.

The play in itself was of little account, with Buffalo Bill omitted, it would have been like the play of Hamlet with Hamlet left out. The majestic figure of the great scout, however, made up for all deficiencies and when he repeatedly bored the cores from apples placed upon the head of May Cody with his unerring shooting he received an ovation.

As stated I did not see "Stop-Cock Jim" again, as a few days after the night of events I learned that he had taken up the northern trail, along with so many others, and had left Petrolia for good. He some years afterwards was located in West Virginia where he acquired considerable wealth in the oil business. He finally located in Cincinnati where he passed away several years ago.

An account of the reception tendered Buffalo Bill did not come to me until a long time after the affair. The tiger, it seems, was quite hungry, and it was authentically stated that he ate up the entire receipts for the show amounting to something like a thousand dollars. I learned at the same time that "Stop-Cock Jim" was considered one of the best poker players in the oil country; this surprised me greatly as I had never had the slightest inkling of this fact.

Col. Cody, like Alexander the Great, finished his life's work at an early age. Alexander conquered the world and died at the age of 32 years. Buffalo Bill conquered the great west at the age of 30 and thereafter became a showman.

His last great fight occurred when the two opposing forces, that of the United States and the combined armies of the Sioux and Cheyennes were facing each other following the Custer massacre, when Yellow Hand, a famous young Cheyenne brave, galloped forward and delivered his challenge in the Cheyenne tongue.

"I know you, Long Hair," he shouted, "come out and fight." Buffalo Bill immediately responded, spurring his horse and dashed to meet his opponent. His first shot killed the savage's mount, at the same instant, the scout's own horse stumbled in a prairie dog hole and threw his rider, the two opponents faced each other on foot. The onlookers were breathless with excitement, whose shot would be the successful one? Before the Indian could get his rifle in position, a bullet from the great scout had laid him low. Cody's luck was again manifested. Quickly and scientifically he scalped the savage; and waving the bloody trophy aloft, he shouted: "The first scalp for Custer." With this battle cry, the regulars soon had the Indians in flight and were completely dispersed, Sitting Bull seeking refuge in Canada.

Buffalo Bill's body lies in a vault in Denver and will soon occupy a tomb hewn in a rock at the top of Lookout Mountain. He was the last of the great scouts. But so long as there are histories of the United States, and so long as there are boys with the love of adventure in their hearts, Buffalo Bill and the other brave men who helped in the winning of the west, will live in the memory of their fellow countrymen for whom they did so much.

FLIRTING WITH DEATH.

An Interesting Reminiscence Picked Up By Our Peripatetic Scout.

IF this narrative should come under the observation of any of the passengers of a certain train on a summer day in the year 1908 he or she will doubtless recall an exciting incident of their journey that occurred at the Philadelphia crossing near Scio, Ohio, whereby the engine of their train collided with a team and wagon causing considerable delay and confusion, but how near the train came to being blown to smithereens was only known to the engineer and fireman and the teller of this story.

Among those that followed the dangerous vocation of shooting wells during the Scio excitement was Harry Furman, who was considered one of the most careful men in handling nitro-glycerine in the business. He had been carefully schooled by his father, one of the early day shooters, employed by Colonel Roberts back in Pennsylvania. To young Furman, who watched his father mixing the treacherous compound at Roberts' plant at Elk City, Clarion county, there was a fascination that made him long for the day to arrive when he, too, would drop the go-devil that would shatter rock and let loose the amber fluid. But it was not until he was 18 years of age that the opportunity came, by his father retiring from active duty. Harry, in keeping at the front of developments, was among the advance guard of shooters to enter the Scio field.

On the morning of June 12, 1908, he received a call to shoot a well located on the Clark farm, a few miles from Scio. With 80 quarts of glycerine in cans safely stored in his buckboard wagon, to which was attached a team of spirited horses, he left the magazine for the well.

At what is known as the Philadelphia road the Pennsylvania railroad crosses this thoroughfare by way of a deep cut. Arriving at this point, and with nothing to indicate the near approach of a train, the cut shutting off a view of the track for a long distance either way, Mr. Furman spoke to his team and when the animals were in the act of stepping on the track, a big passenger engine drawing a heavily loaded train, and traveling at a seventy mile speed, burst into view. With great presence of mind Furman threw his weight on one line, thinking to swerve the team far enough out of the way, thereby keeping the engine from striking the wagon, knowing well if this should happen a terrible wreck would be the result. In telling the story he said he lived a lifetime in the few moments that passed from the time the locomotive came into view and when he found himself standing by the roadside holding one of the horses that was stripped of harness and bleeding from a severed artery on one of its forelegs. Its mate had been literally torn to shreds and scattered along the right of way for a distance of twenty rods. So great was the train's momentum that the engineer was unable to bring it to a stop under a mile limit

and, supposing the driver was killed, he reversed his engine and backed up to the scene of the accident to find Mr. Furman endeavoring to stop the flow of blood from the horse's severed artery. The engineer's first words upon arriving at the crossing were: "Great heavens, young man, you had a narrow escape. I fully expected to find you cut to pieces."

"You may be thankul that you are alive, too," was the reply of Furman.

"Why so?" asked the engineer.

"For the reason there were 80 quarts of glycerine in the wagon you see overturned back there at the foot of the grade," pointing to the buckboard lying on its side in the ditch at the crossing twenty yards distant.

"My God, you don't tell me there was glycerine in that wagon," replied the engineer in a trembling voice as slowly he climbed into the cab of his engine. So great was the shock to the engineer's nerves that upon arriving at Dennison he was compelled to leave his engine and go to his room in a hotel.

Mr. Furman continued the dangerous vocation of shooting wells for a number of years following the accident, but finally quit the business for all time. He is now engaged in the oil business near Steubenville, Ohio, and finds it more agreeable and not so strenuous as his former occupation.

MISCELLANEOUS.

THE DRILLER'S TOOL BOX is being manufactured by the Mannington Boiler Works, located at Mannington, W. Va. This is an entirely new departure in this branch of field equipment and it is giving the best of satisfaction. It is constructed of blue steel plate, reinforced by angle iron, with self-sustaining lid and sliding tool box. It is positively rain proof. *See ad. in this issue.*

One of our advertisers has received the following letter. It is printed here as a curiosity and at the same time shows that this magazine reaches the remote countries. If any of our subscribers are interested in the Persia or China fields here is an opportunity to secure a competent driller:

DEAR SIR—Noticing in the Oil and Gas Man's Magazine your advertisement, I thought it would be advisable to write and see if you could secure me a position as driller in some of the foreign well boring plants, such as Persia, China, etc.

I hold a Queensland government driller's license which is a reference as to my ability, and also an engine driver's certificate. I have been drilling for the last 10 years in Queensland and would very much like to have a change.

Thanking you and hoping you may be able to put something in my way, I am

Yours very truly,

LEW BROMHALL,
Richmond,
Queensland,
Australia.

The Advance Oil Company, incorporated and capitalized at $30,000, have purchased ground at Reno, Pa., and are rushing to completion a building for the compounding of oils and the manufacture of soaps, etc. The company is composed of local capitalists and is the outgrowth of a company of the same name, with offices in Oil City, Pa.

OBITUARY.

Mrs. Catherine Seep, wife of Joseph Seep, the well known general oil purchasing agent, for Standard Oil interests, died at her home in Titusville, February 15, after a few hours of illness. Mrs. Seep's maiden name was Hillenmeyer, and she was born in Fayette county, Ky. She became the wife of Mr. Seep on January 30, 1866. They moved to Titusville in 1869 which has ever since been their home. Mrs. Seep was the mother of 11 children, 9 of whom survive her, as follows: Mrs. Lillian Quinby, of Titusville; Mrs. J. H. Fennessy, of Greenwich, Conn.; Mrs. J. J. Harvey and Mrs. Joseph Fleming, of Titusville; Eugene and Arthur, of Oil City; Albert, of Denver, Col.; Herbert, of Erie; and George, of Titusville.

Mrs. Seep was highly esteemed in the community in which she lived and will be missed and affectionately remembered for her kindly character and devotion to home and her work within her church, St. Titus R. C. church, with which she was closely associated, and her many other deeds of unostentatious charity.

Michael Murphy, in his seventy-fifth year, died at his home in Merion, near Philadelphia, Pa., on Saturday, March 10, from an attack of pneumonia. Thus passed away one of the most spectacular figures in the oil business.

Mr. Murphy became famous during the Cherry Grove excitement in 1882, when he earned the title of "The King of the Mystery Men."

The Grace & Dimick mystery on the lot of the famous numerals "646" was one of the most successful undertakings of the kind known in the history of oil producing. Murphy succeeded in getting a good pointer on the well and secured the whole of lot 619 on a direct 45 degree line northeast of 646. Two wells were completed, the first starting off at 1,600 barrels and the second at 3,460 barrels the first 24 hours. The valuable lands on 619 were secured for $100 an acre and one-eighth royalty. These wells were both heavily guarded and no information was allowed to leak out. From this time on he was actively engaged in all oil fields. His greatest speculative achievement, however, culminated on April 17, 1895, when through several months of "cornering" the market was shoved up to $2.69 per barrel and he succeeded in unloading on the Standard agency the largest credit balance (140,000 barrels at $2.60 per barrel) ever sold at one time.

Mr. Murphy leaves a widow, four sons and two daughters.

Benjamin S. Tupper. A brief news dispatch from Plainsville, N. J., announces the death of Ben Tupper, which occurred on April 2. Thus passes away another pioneer oil man and one of the best posted field men of the exciting days when oil exchanges and mystery wells were the controlling features of the oil business.

Of genial temperament and pleasing address Mr. Tupper made friends with all with whom he came in contact. The men living today who link the present with the romantic days when Western


Milestones i
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It pays to be
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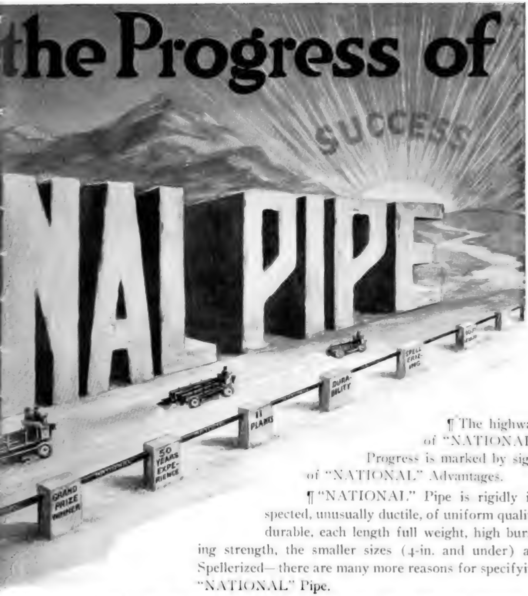

¶ The highway of "NATIONAL" Progress is marked by signs of "NATIONAL" Advantages.

¶ "NATIONAL" Pipe is rigidly inspected, unusually ductile, of uniform quality, durable, each length full weight, high bursting strength, the smaller sizes (4-in. and under) are Spellerized—there are many more reasons for specifying "NATIONAL" Pipe.

¶ Send for the "NATIONAL" Bulletins in which you are interested—free to anyone whose letterhead or position would indicate a legitimate use.

DISTRICT SALES OFFICES:

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Pennsylvania represented the oil world are growing less with each year, so that the death of the former "Dean of the Oil Scouts" will no doubt arouse memories within them of those romantic days that have vanished never to return.

What a story, of 50 years in oil, Mr. Tupper could have written if he had so turned his mind. He saw Pithole spring up like a mushroom in the night and in three months have a population of 15,000. He also saw its decline. He followed the trail to the Foster Farm, Shamburg, Petroleum Centre, Parker's Landing and Butler county and thence to the great Bradford field. With the advent of the idea of making mysteries of important wells in order to affect the oil market for speculative purposes at Cherry Grove in 1882, Mr. Tupper became a scout, representing the Consolidated Oil Exchange of New York City, following this occupation through the stirring days of Thorn Creek and McDonald. With the decline of the Oil Exchange and the ban set upon making a mystery out of a well, Mr. Tupper became a broker, negotiating the sales and purchases of oil property and operating on his own account, until advancing years compelled his withdrawal from active life. He was aged 85 years.

Wm. H. Libby, aged 71 years, died in his apartments, Hotel St. George, in Brooklyn, January 27. Born at Whitehall, N. Y., he had been engaged in the oil business all his life. His company was taken over by the Standard Oil Company 30 years ago, since which time he has been connected with the foreign trade of the Standard Company. He was a director of the Standard Oil Company of New Jersey.

Virgil P. Kline died at Cleveland, Ohio, January 18, aged 80 years. Mr. Kline was the personal attorney for John D. Rockefeller for many years and was leading attorney for the Standard Oil Company in the many celebrated litigations in the years of its development.

EPIGRAMMATIC TRUTHS.

A corkscrew will never pull a man out of trouble.

Experience, like a marriage certificate, is not transferable.

Some men grow as their business grows; others merely swell.

Many a young man needs less pull and more push.

The man intent on enjoying himself and having a good time, is nibbling the rat-biscuit.

If it came to a show-down, which would you rather be—a Has-Was, an Is-Now or a Not-Yet-But-Soon.

The man with all the time there is to do a task, is like a cigarette smoker or a whiskey imbiber who can quit any time.

Good things all come by indirection, and they also usually travel incog.

A diplomat is a chauffeur who has a cab-driver for a chum.

Nobody ever becomes a nervous wreck while he is succeeding, no matter how hard he works. He goes by the board only when the tide turns against him or when he quits work to have a good time.

No matter how many college degrees a man has, if he can not earn an honest living he is an educated ignoramus, and is one with the yesterdays, doing pedagogic goose-step adown the way to dusty death.

NATURAL GAS SHORTAGE.

DURING the record breaking cold weather last month there was a marked scarcity of natural gas all over the country—not alone in Ohio, but Pennsylvania, West Virginia, New York, Oklahoma, Indiana and Texas; in fact, not a single state, or community, where natural gas is extensively used, was free from shortages for at least brief periods.

This condition is readily explained by the facts.

We all know that the carrying capacity of a pipe line of given size is limited, just as much so as a peck measure can only hold a certain number of potatoes. You can perhaps crowd in a few extra potatoes by putting in small ones, or stacking them on top, but if you put in too many they will fall off.

It is just the same with a gas line.

A ten inch line of a fixed length will carry a certain amount of gas, at a certain pressure, say 100 pounds to the square inch. If you increase the pressure to 200 pounds, you can further increase the capacity of the line, and if you put on 300 pounds pressure, you can deliver an additional amount of gas, but there is a limit to that amount just as there is to the peck measure. If too much pressure is put on the line, there is grave danger of it blowing up, and shutting off the supply entirely; therefore the experienced gas man will not run the pressure up beyond a certain factor of safety.

In ordinary weather, and in normal times it is a comparatively easy matter to furnish an adequate supply of gas for all requirements, but conditions have been abnormal, as we all know, and it is not strange that natural gas companies should fail at times to live up to the high standard of efficiency that had been established in previous years.

No person could foresee the extraordinary demand that has been made on the gas companies by reason of the unexpected wave of prosperity that has swept over the country, causing every industrial plant that could turn a wheel to run night and day. Not only did the factories want an extra amount of gas, but the great army of employes consumed more gas than they ever did before, and by reason of thousands of men working at night, more gas has been used for cooking and heating than in former years.

Then again the coal operators were unequal to meet the emergency and could not furnish sufficient coal, and the price was advanced so that coal was much more expensive than gas, with the result that many coal consumers commenced using gas, and once a gas consumer, always a gas consumer, because they will never go back to coal again.

Even the railroads contributed to the gas shortage by failure to move coal promptly, and so the great army of gas users was augmented by thousands of former coal consumers. In one city alone it is reported that 5000 coal furnaces were burning gas this winter on account of the scarcity and high price of coal. Therefore it can be readily understood why there has been a scarcity of gas in zero weather.

It is not a shortage of gas so much as the inability to get sufficient through the

pipe line systems, due to the unusual and abnormal causes previously cited. Everybody wanted more than they ever used before, and although the pipe lines were crowded to their utmost, it was a physical impossibility to get sufficient through to meet the great demand.

The problem that now confronts the gas men is how long will this era of prosperity last, and will it pay to build additional trunk lines.

The price of pipe is almost prohibitive, costing about three times as much as it did 18 months ago, and the pipe mills will not guarantee delivery of any large quantity under one year's time.

Will the consumers help defray the cost of additional pipe lines by agreeing to pay more for the gas, which is now the cheapest fuel known to mankind?

Have you ever noticed what a howl goes up when a gas company is short of gas for a few hours at a time, or perhaps three or four days in an entire winter; how the newspapers feature it, and how committees take it up with the Chamber of Commerce, or Public Utilities Commission, and demand an investigation?

Gas companies as a rule show a greater percentage of efficiency than any other public utility, and when one does fail temporarily it is so noticeable that many newspapers treat it as a news item. Yet the crack trains of the great railroads are hours late day after day and thousands of people are discommoded, but it is treated as a matter of fact, and very rarely do the newspapers say anything about it, and the public accepts the treatment philosophically. This is due, no doubt, in a great measure to the fact that the public is accustomed to such treatment and is familiar with the troubles and obstacles that a railroad has to overcome in order to give perfect service.

The public knows that tracks are crowded; that the rolling stock will break down; that the terminals are overtaxed, and that accidents will happen, yet you never hear of a committee taking any action, or travelers going before the Public Utilities Commission and complaining.

The gas industry is essentially a mining proposition with, however, more unknown, uncontrollable, and uncertain features to cope with than exist in the mining of coal, or running railroads, and perhaps some day natural gas companies with their wonderful record of efficiency, will be better appreciated and the consumers will treat them as kindly as they do the railroads and other utilities.—H. C. Reeser, *Secretary and Treasurer of the Ohio Fuel Supply Company.*

—In the "Gas Magazine."

The Spirit Medium Locating an Oil Well with a Hazel Fork.

The craze is dead, but in the early days many an otherwise sensible man blew in his last dollar on the dip of the rod.

NOTES OF INTEREST.

TANK STEAMERS SUNK BY SUBS.

Several tankships were destroyed in March by German submarines, the number including American, Dutch, Norwegian, British and French vessels. All were reported sunk while going through the proscribed German U-boat zone except the American tanker Healdton, belonging to the Standard Oil Company of New Jersey, which was torpedoed March 21, while off the Haarlem coast of Holland and in the so-called safe lane stipulated by the German government. It is estimated that 21 men out of a crew of 41 were lost, including seven Americans. The Healdton was enroute from Philadelphia via Bergen to Rotterdam with a cargo of 2,137,711 gallons of oil, having left Chester, Pa., on January 26. She was of a gross tonnage of 4,488 and was built at Greenock, Scotland, in 1908. The Healdton was insured in the government war risk bureau for $499,000. Private insurance companies are understood to have carried as much more on the hull.

The Texas Company's American tanker Illinois, returning from London for Port Arthur, Texas, in ballast, was sunk by a German submarine on March 18. She had left Port Arthur on February 17 with a cargo for London and on her way over had rescued on February 27 the crew of the French freighter La Perouse which had been wrecked by storms and was carrying oil in barrels from New York consigned to the French government. The Illinois was one of the Texas Company's finest boats, and was sent across only because of contract requirements. Her gross tonnagee was 7,696 and carrying capacity of 60,000 barrels. She was also insured by the government war risk bureau in the sum of $250,000.

The Dutch tank steamer La Campine, owned by the American Petroleum Company, and enroute from Rotterdam to New York, in ballast, was sunk by gunfire by a German submarine while in the North Sea on March 13.

The Norwegian tanker Malmanger, 3,810 tons, from New York to Avonmouth, with a cargo of kerosene, was sunk by a submarine or mine off Fastnet on March 22. This was her first trip, having been built by the Chester Shipbuilding Company in 1916. She was owned in Norway.

The British tank steamer Pinna, plying between Port Arthur and Queenstown, was reported sunk early in the month.

The Gulf Refining Company's new tanker, Gulfmaid, was launched March 20 at the yards of the New York Shipbuilding Company, Camden, N. J. She is of the Gulfoil class, loads 55,000 barrels of oil, and is expected to start south on her maiden trip April 3, to take a cargo at the Gulf Company's Port Arthur refinery. Three other tankers of the same type are building for the same owner at the Camden yards. Two have been named, Gulfland and Gulf of Mexico. The latter will doubtless be known on the docks as "Gulfmex."

In the torpedoing of the British tank steamer Pinna February 11 off the Irish coast, one of the fleet of tankers that plied regularly between England and Gulf of Mexico ports was taken off the list. The Pinna was one of the Shell

line fleet, as its name would indicate, all vessels of that fleet having been named after marine life of the shell variety, and each vessel carried one of the particular shells in a glass case in the master's cabin. The Pinna in her early days was considered a big tanker.

Production in 1916.

Wyoming production in 1916 was approximately 6,300,000 barrels, an increase of 2,000,000 barrels over 1915. Refineries at Casper, Greybull and Cowley are now handling 22,000 barrels a day. Construction plans have been approved and are under way that will increase this output during 1917 about 100 per cent. Pipe line capacity is fully employed and is handling but little more than half the production of six established producing fields. If the year's development program materializes, Wyoming production may reach around 70,000 barrels a day, at least potentially.

Prospects for 1917.

A forecast of development work that will be under way in Wyoming when spring opens shows that approximately 200 wells, in proven and prospective territories, are listed for drilling. The Midwest organizations—the Midwest Refining Co., the Midwest Oil Co., the Greybull Refining Co., and other subsidiaries—are actively at work.

The Goodyear Tire and Rubber Company, Akron, Ohio, is announcing the following changes in branch managers, to take effect immediately:

Mr. E. B. Sigerson, for several years manager at Buffalo, N. Y., has been given special work in the Automobile Tire Department at the company's main office at Akron.

Mr. C. M. Klopp, special motor truck tire representative at Syracuse, N. Y., is promoted to branch manager at Buffalo, New York.

Mr. J. E. Taylor, of the Automobile Tire Department at Akron, becomes the branch manager at Charlotte, N. C.

Mr. M. Orr, former manager at Charlotte, takes charge of the company's branch at Syracuse, N. Y.

Mr. W. C. Blake, for six years manager at Syracuse, is advanced to branch manager at New York City, succeeding P. W. Smith, who has resigned to take up other work.

Don't Watch the Clock.

According to Alfred C. Bedford, the new president of the Standard Oil Company, one cannot win his way to success if he watches the clock. In a speech to a large gathering of young men in Brooklyn the other day, Mr. Bedford emphasized these rules:

"Do everything you are told to do.

"When you have finished, look around for more to do.

"Have no regard for hours.

"Read and study and think of your work.

"Have imagination; have some vision.

"When a fellow misses a chance he worries. But there is another coming—it is just around the corner. Catch it as it goes by.

"I always ask any young man that comes into my office whether he has any religious affiliations or not. When any fellow has somebody or something stronger than he, on whom he trusts in temptation, it will bring him over his trials and give him success."

Allies Will Pay for Destruction.

W. T. Parker, a Texas oil man who sought his fortunes in the Roumanian

fields, has returned to Texas after witnessing the destruction of the fields and barely escaping with his life. He intends going to Humble, where he will take up work in the oil fields.

According to Mr. Parker, who arrived in Houston last week, a thorough job was done in ruining the wells, but the allied governments have agreed to pay for the American property they destroyed. Mr. Parker was in the Prahova district near Ploesta, in the employ of the Standard Oil Company.

"A number of times the German forces were as close as 30 miles to the fields, sending engineers to the field to estimate the oil there and to learn how many wells were American property," Mr. Parker said. The Germans were looking forward to taking over the wells, but when the allied forces were driven back the wells were destroyed.

Regarding the payment of an indemnity by the allied governments, he said:

"The governments of the allies have agreed to pay for the destruction of the Ploesta fields; the company has contracts to this effect signed by the heads of the English and French governments, but then money is lacking. It may be settled in the next year or so and it may not be settled at all. It all depends upon who is victor in the present conflict."

On several occasions Mr. Parker narrowly escaped being killed before he left Roumania. He made his way through Russia and then by boat to the United States with the utmost hardship.

EUREKA PIPE LINE COMPANY'S PUMP STATION AT DOWNS, WEST VIRGINIA.

One of the most up-to-date oil pumping stations in the world.
Capacity 75,000 barrels per day.

A dispatch from Washington recently said that the Standard Oil Company is understood to have taken up with the federal government the question of an indemnity for the destruction of its properties in Roumania. The value of the properties, consisting of wells, plants, lines, equipment and oil in storage is placed at about $150,000,000.

It is not known just what government is held responsible for the wholesale destruction of the property, the dispatch said.—*Gulf Coast Oil News.*

Gasoline Production.

George A. Burrell, consulting chemical engineer, Pittsburgh, Pa., and an authority on casinghead and absorption gasoline, has recently made visits to many gasoline plants to test gas and advise about the construction and operation of plants. In answer to complains of decreased production of some plants, Mr. Burrell states that frequently much dry gas is run through compression plants and that this dry gas containing little gasoline amenable to compression, by absorbing part of the power, actually prevents the release of gasoline contained in the wet or rich gas. For instance, one plant that was losing output drew gas from 20 wells; but cutting off 4 wells that produced mostly dry gas the output came back to normal quantity. This is something to know and watch. It is known and watched by some plant managers, but others do not seem to know it, believing that the dry gas will be carried by the wet gas and add to the output. Compression makes no impression on dry gas and does not produce profit from lean gas; absorption is the only profitable process for lean and dry gas, and is possible where large quantities of gas are coming steadily that will, during the 24-hour run, turn out a volume that is commercially profitable as a by-product of other operations. The necessity of careful analysis of gas thus becomes immediately apparent to determine the desired profits. Gas received from many wells over a wide area will be found to vary considerably in gasoline content, in some instances surprisingly so, and a few dry gas wells will almost certainly cut down the percentage of extraction. A book on gasoline, written by Mr. Burrell, has been issued by the Oil Statistical Society, of Boston, Mass.

In the Allied Trades.

A. M. Byers Co., of Pittsburgh, with offices in New York, Boston, Chicago and Houston, have just opened another branch in the Laughlin Building, at Los Angeles, Cal., with R. W. Belfield in charge. The new offices will look after the business of the California oil country, where the sale of Byers genuine wrought iron pipe is rapidly increasing.

Goose Creek Holds First Place.

Goose Creek easily held the lead in the Gulf Coast production during the week just ended. Humble was a bad second and Sour Lake a poor third. Goose Creek's average daily production held throughout the week the rate it had at the close of last week. The 7,000 barrels of initial production brought in during the week boosted the daily average some, but it was needed to keep the average up, as several wells fell off considerably in production.

Following is how the daily average production at Goose Creek was distributed during the past week:

Gulf Production Company.....	11,000
West Virginia Oil Company....	6,000
Humble Oil Company.....	3,750

Simms-Sinclair interests	2,800
Onondaga Petroleum Corp.	2,000
C. T. Rucker	2,000
Sun Company	1,600
Blaffer & Farish	1,200
Empire Gas & Fuel Co.	600
Staiti et al	400
Miscellaneous	1,000
Total production	32,350

Guarding Refineries.

Beaumont, Tex., April 4.—Orders have been received for Company M, Third Texas Infantry, to protect the oil refinery and other interests at this port. Companies I and L of Port Arthur and Company K of Orange are expected to be ordered to guard refineries and other interests in the vicinity of their towns. There are four refineries in this territory valued at $4,000,000.

Twenty-one New Wells.

San Francisco, Cal.—The reports of oil field work made to the State Mining Bureau for the week ending March 24, 1917, show twenty-one new wells started, making two hundred and sixty (260) new wells started since the first of the year, nineteen (19) to be inspected for test of water shut-off, six (6) deepening or re-drilling, and six (6) to be abandoned.

Mexico Increases Her Production.

According to official records of the de facto government, prepared from reports furnished by all operating companies, the production of crude petroleum in Mexico in 1916 was 39,817,402 barrels. The Tampico zone (Panuco and Topila) supplied 20,616,840 barrels; the Tuxpam zone (Potrero del Llano, Juan Casiano, Cerro Azul, Alamo, Los Naranjos, etc.), 1,903,231 barrels; and the Minatitlan zone (Cristobal, etc.), 168,331 barrels.

Mexico's crude oil production in 1915, as given by the United States Geological Survey, was 39,910,508 barrels. Using these figures as a basis for comparison, the increase in 1916 was 6,906,894 barrels.

Crude oil exports during 1916 amounted to 21,183,728 barrels, and the exports of refinery products 5,815,016 barrels, a total for both items of 26,998,744 barrels. Tampico led with 13,347,948 barrels of crude and 4,276,350 barrels of refinery products exported. Tuxpam was second with 7,789,580 barrels of crude exported. Puerto Mexico (Coatzacoalcos) was third with 1,538,665 barrels of refinery products and 46,200 barrels of crude exported.

Half a Birthday.

The "Gulf Coast Oil News," published at Houston, Texas, has just celebrated "half a birthday." We believe this is the first weekly magazine ever established in the oil country. It is a lively youngster and deserves the success that it is reaping.

The coastal country is now one of the most important on the oil map and it is fortunate in having such an excellent medium to give to the outside world comprehensive news pertaining to its doings.

May the "News" continue to prosper and extend in its usefulness.

Pump Station Destroyed by Fire.

The Cumberland Pipe Line Company's station located at Lewis, Morgan county, Kentucky, was destroyed by fire at an early hour on April 10. A gauger carried a lighted lantern up on a 35,000 barrel tank, completely filled with oil for

the purpose of taking a gauge. There was an explosion of gas setting fire to the oil in the tank which boiled over, burning all the buildings. About 5,000 barrels of the oil was saved. The loss will reach $125,000.

The Cumberland Company had just completed the equipment of the station for the handling of the increasing production from the Estill county field, located 24 miles west of the pumping station. The loss of the pump station will be particularly felt at this time as it was expected to care for the oil resulting from the new developments in the Estill district.

"Louisiana is destined shortly to be the leading oil producing state of the union, according to W. F. Braun, the first to discover oil in Oklahoma in 1891. Mr. Braun has three holdings in Louisiana—the Concordia Oil and Gas Company, at Opelousas, in Franklin and in Jennings, La. He declares he expects land bordering the Mississippi river between Natchez, Miss., and New Orleans, to prove a treasure trove to oil men."

The Mr. Wm. F. Braun mentioned above was at one time located in Pittsburgh and Butler, Pa. His claim of having been the first to discover oil in Oklahoma in 1891 is being disputed here. The first company to drill for oil in the then Indian Territory was formed in Butler, Pa. Dr. M. E. Headland, a resident physician of this place, has all the original papers, including the lease of a vast acreage. This will be given in full in our next issue.

Pipe Line Picnic.

The big Pipe Line Picnic, celebrating the 59th anniversary of the striking of the Drake well in August, 1859, will be held at Conneaut Lake on August 2, 1917. There are no submarines in this fine body of water and there need be no fear of a Zeppelin dropping bombs on the gay assemblage. An elaborate program is already being prepared. A free barbecue will be a feature. An ox will be roasted and served with everything that goes with it, entirely free to the guests of the day. This will be the greatest event in Western Pennsylvania in the way of entertainment this summer.

A German Suspect.

We are in receipt of news as we go to press that our assistant manager and well known writer, Mr. John L. Hunter, had been arrested in West Virginia as a suspected German spy. His camera and "copy" for this month's issue was destroyed and he thrown into jail. He was soon released, however, through his identification by employees of the Oil Well Supply Company and Mr. Wallace, of the United Fuel Company, but our subscribers will no doubt miss his photographic views and write-ups of the fields that form a part of this magazine's offerings.

The splendid oil country story, "646 and the Trouble Man," by C. H. Oliver, a book of 209 pages, profusely illustrated and nicely bound in cloth, will be sent prepaid, together with the "Oil and Gas Man's Magazine" for two years as now issued for the bargain figures of $2.25.

The present edition of the book will soon be exhausted, so get busy.

Address The Oil and Gas Man's Magazine, Butler, Pa.

The Timber-Woods Oil and Refining Co., operating in the first sand, heavy oil pool, Franklin, Pa., are preparing to increase the output of their refinery by installing another 75 barrel still.

$100.00 CASH PRIZES.

A poster is now on the press and will shortly be distributed to all natural gas companies which are members of the Natural Gas Association of America, and some information contained on this poster is as follows:

$100 CASH PRIZES

To Be Given to Visiting Gas Men at May Convention at Buffalo.

The board of directors of the Natural Gas Supply Men have formulated a plan whereby prizes aggregating $100.00 will be given for the best answers to certain questions—such answers to be presented at the convention of the Natural Gas Association of America—to be held in the Broadway Auditorium, Buffalo, N. Y., May 14-17, 1917. Seven prizes will be given as follows:

ONE FIRST PRIZE, $50.00.
ONE SECOND PRIZE, $25.00.
FIVE PRIZES, $5.00.

The contest will consist of securing answers to questions (which will be published later).

In addition to the above twenty-five questions on the natural gas industry, each exhibitor will be entitled to one question, the answer to which will be very simple.

GENERAL INFORMATION.

Where do I get the questions to be asked by the exhibitors?

Answer: The questions will be handed you in book form when you register.

Where can I get the correct answers to the exhibitors' questions?

Answer: By visiting each booth and asking the representatives in charge, you will be given the correct answer to the question asked by that exhibitor.

Who will be the judges of this contest?

Answer: A committee appointed by the board of directors of the Natural Gas Men's Association of America.

Will regular forms be provided for answering questions in this contest?

Answer: Yes, at the convention hall.

When does the contest close?

Answer: Thursday noon, May 17.

When will the winner be announced?

Answer: As soon thereafter as is possible for the committee to decide.

What becomes of my answers after the committee has decided on the winner?

Answer: All the papers in this contest will be turned over to the general managers of the companies by whom you are employed, so as to show him the live members of his organization.

Where do I get the answers for the questions outlined above?

Answer: Any place you please.

Who can enter this contest?

Answer: Any gas fan who is eligible to register.

When should I answer the 25 questions noted above?

Answer: It is suggested that you investigate and secure your information—writing up the answer to each question prior to coming to the convention and then bring your paper containing the answers with you. While not absolutely necessary, it is suggested for the convenience of the judges that these answers be type-written.

Will the names of the contestants be known to the judges?

Answer: No; each paper will be designated by number and the judges will not know the names of the contestants.

Where can I get further information about this contest?

Answer: Write to Larmour Adams, Secretary of the Natural Gas Supply Men's Association, First National Bank Building, Pittsburgh, Pa.

In addition, this poster will contain a humorous letter—supposed to be written by "GAS MAN BILL" to a friend of his, outlining what he expects to do at the convention and his intention of winning the $50.00 to secure new "riggin" for his wife.

OIL MEN STRAIGHT-OUT AMERICANS.

The following terse and characteristic letter from the hand of Theodore Roosevelt, to the Editor, in acknowledgment of the receipt of a copy of the oil region story "646 AND THE TROUBLE MAN" *is herewith presented in reduced size. Teddy's words, "the oil country boys are straight-out Americans of the not-too-proud-to-fight variety," is pertinent and well taken at this particular time:*

Metropolitan

THE LIVEST MAGAZINE IN AMERICA
432 FOURTH AVENUE, NEW YORK

Office of
Theodore Roosevelt

January 30th, 1917.

My dear Mr. Oliver:

That's mighty nice of you. The book has come. I shall read it at once, and I know I shall like it. The oil country boys are straight-out Americans of the not-too-proud-to-fight variety, and I believe in them.

Sincerely yours,

T. Roosevelt

Mr. C. H. Oliver,
Oil & Gas Man's Magazine,
Butler, Pa.

NATIONAL PREPAREDNESS.

By Berton Braley.

Are we prepared? yes for every emergency,
Every contingency under the skies;
Ready for cases of danger and urgency,
Ready for commonplace needs that arise;
Fully prepared for our labor or pleasuring,
Armored and armed for the course to be fared,
Fit for each chance that the mind can be measuring—
"National" tubing has made us prepared.

"NATIONAL" tubing prepares us for traveling,
Carries the steam that is driving the train,
Keeps us in ease as the miles are unraveling
Over the mountains and over the plain;
"NATIONAL" tubing brings water of purity
Into our homes from the faraway hills,
Stands at our windows, a guard of security;
Brings us our gas—and the drudgery kills.

Why from the time we are infants in carriages
(Go-carts of "National" tube, as you know),
Up through our childhood, our loves and our marriages,
On till our tresses are covered with snow,
"National" tubing's assisting and aiding us;
Keeping us warm when the icy winds blare,
Holding up awnings, in summer for shading us,
"National" tubing has helped us prepare.

Masts for a battleship, shafts for machinery,
Pipes for the drills digging copper and gold,
Poles for the power wires looping the scenery,
Frames for the plows that are turning the mold;
"National" tube, in a thousand varieties,
Serves for ten thousand requirements of life,
Whether in places where comfort and quiet is
Or in the midst of the heat and the strife.

So when we speak of preparedness "National,"
"National" tubing is there—it's a pipe!
Fully prepared for the needs that are rational,
Builded for service of many a type;
Dreamers have dreamed and the thinkers have thought of it,
Till every nation its service has shared;
Framework of civilization is wrought of it,
"National" tubing has made us prepared!

National Tube Co., General Sales Offices, Frick Building, Pittsburgh, Pa.

Interesting Account of Business Conditions In South America.

"Business conditions in South America are improving rapidly, although not quite up to normal," declares G. M. Stadelman, vice president and sales manager of the Goodyear Tire & Rubber Co., of Akron, Ohio, who has just returned from a four months' visit to Brazil and Argentine.

"Both countries have been seriously affected by the war," says Mr. Stadelman, "and both are handicapped seriously by the lack of home-produced fuel, and are obliged to import either oil or coal for heating purposes. The railroads in some instances are obliged to use wood.

"Brazil exports an enormous quantity of crude rubber and coffee. The rubber is of the finest quality and therefore in great demand but the great difficulty in overcoming labor conditions has operated to limit the production seriously. The annual exportation, therefore, has remained practically unchanged for the last decade, running about 38,000 tons. Argentine excels in the production of beef.

"The people of Brazil are particularly friendly to and great admirers of the United States. They are in deep sympathy with us in our treatment of foreign relations and will support this country in its stand on questions of world importance to their utmost.

"We must remember, however, that Brazil is removed from us 6,000 miles or more and naturally will make no move the consequence of which she feels she might not be able to endure.

"I was everywhere impressed with the municipal efficiency of the South American cities. Our people could learn much about governing large cities by visiting South America. Both Buenos Aires and Rio Janeiro are very beautiful, well policed and kept scrupulously clean. Both have magnificent boulevards over which a constant stream of motor cars passes. It seemed to me that there must be more motor cars on these thoroughfares than anywhere else in the world.

"Most of these cars are European, although American cars have been introduced and are rapidly coming into popular favor. Taxicabs are numerous and are heavily patronized. A chauffeur and a footman are assigned to each car. The scrupulously neat appearance—both inside and outside, of these cars, appealed greatly to me. South Americans take great pride in keeping their cars in fine shape.

"Magnificent roads lead from all the larger cities. The prime condition in which these roads are kept is a wonderful stimulant to motoring.

"Our Goodyear organization is aggressive in South America just as it is in the United States, and has secured a large share of the country's business, consequently Goodyear tires are very prominent on the motor cars there."

QUARTERLY REPORT.

Oil Developments and Markets.

AN ANOMALOUS condition, affecting all commodities—especially oil—now prevails in this country, occasioned by the entry of these United States of America into the world war. No definite thesis, therefore, can be advanced at this early date as to the consequences that may follow our belligerency.

It is doubtful, even, that those who are in close touch with all the ramifications of the business, could, at this time, predict the probable course of the oil business for the next six months; it is one of problematical possibilities.

There is a sea of uncertainty now existing—newspapers are filled with all kinds of rumors most of them when traced down have no foundation in fact—under these circumstances if the oil market should be sustained at the present liberal price it certainly would indicate that it is builded on a strong financial rock.

One of the discouraging features, since Germany started her ruthless submarine campaign is the sinking of quite a number of tank steamers reducing our export business, to some extent, to European ports. The tank tonnage is already inadequate to supply the demand, and the recent losses are, therefore, viewed with something bordering on alarm. There is a desire among the export oil shippers to await the outcome of Uncle Sam's determination to open up a safe lane across the Atlantic. As the United States is an ally of the entente group of countries and as oil, in its various by-products, is a very great necessity in the successful carrying out of the war, it will undoubtedly be up to this country to see that oil is supplied if every tanker has to be convoyed.

The American oil shippers has awakened to the realization of the necessity for oil tankers and since the commencement of the war orders for over 100 new oil tankers have been placed with American shipbuilding concerns. About 26 of these have been launched and 61 are scheduled to be completed during this year. The war coming on may retard the completion of these vessels by the ship yards having to take care of government orders first. Before the war the oil companies found it to their advantage to have their ships under foreign registry by reason of employment of cheaper labor. The need of tankers has been forcibly demonstrated during the war by the orders for a greater amount of oil than could possibly be delivered. An oil tanker costs a round million of dollars to construct.

That there will be a great demand for American oil after the war goes without saying. The countries of the world have no surplus oil, their stocks have been depleted and with the exception of Mexico, the United States will have a monopoly of the oil business for at least a year, or before the oil fields of Europe can be rehabilitated.

The Standard Oil Company of New Jersey has the largest number of tankers under construction. The Mexican Petroleum Company has 14 new vessels under way, four having been recently completed. The Texas Company has placed orders for 12 new vessels, most of which will not be completed until 1918. The Atlantic Refining Company and the Standard Oil Company of New York are both in the game for several new tankers, so that after the war American registry for this class of vessel will be greater than that of any other port.

Some interesting data has been prepared regarding the use of oil for fuel for battleships. The United States navy has, which is pretty generally known, practically abandoned the use of coal; all her new destroyers, submarines and dreadnaughts have been fitted with oil burners. Experts have summarized the advantages of oil to our fighting ships in several classifications briefly; increased speed, absence of smoke, reduction in stoke hold staff and increased construction efficiency. This, however, brings up a question of serious moment to the users of oil, producers and refiners. It is said that the world's mercantile marine alone, if operated upon an oil basis, would use six hundred million barrels of oil annually, and the world's navy would call for an additional seventy-five million barrels—a total of six hundred and seventy-five million barrels of fuel oil for marine activities if they were placed upon that basis, and the tendency is decidedly pointing to that end—with the world's supply about five hundred million barrels of all kinds of oil—it will be readily seen that the marine, to a large degree, will have to get along with coal for fuel. The United States must have the oil for its ships; that is a safe conclusion. With the California field declining and the stocks being drawn upon heavily each month, the government will, no doubt, soon commence to take steps for a conservation of this valuable product by placing an embargo on it until after the conclusion of the war.

Since our last report, notwithstanding the rumors of war and actual war itself, the oil market has remained steadfast. The last advance of the Pennsylvania grade was for 10 cents on January 9, to $3.05 which is still the quotation. On February 15 Crichton was advanced 10 cents and on March 9, all grades of light Caddo and DeSoto crude was increased 10 cents. March 14, Caddo heavy received an advance of 5 cents and March 17, all grades of light Caddo and DeSoto crude got a boost of 10 cents. These are all the changes in the market up to the date of this report, April 15.

Spring work in all the oil fields east of the Rocky Mountains has been held back by bad roads. April, however, is showing a disposition to do better and new work will soon be on with a rush in all fields.

The high price for all grades of oil and the steady increasing demands is inspiring and will no doubt have a stimulating effect in urging the operators to increased efforts in the coming months of activity.

The cost of material will have a tendency to keep the small producer quiet in the way of new ventures, especially in the old fields, and his concern will be more in the way of keeping his small wells in the pink of operative perfection. The incorporated companies, of which there are legions, who are working on the dear people's money, will have no compunctions about spending it freely, as their only hope of success lies in

THE CONSERVATION OF ENERGY AND THE TRANSMISSION OF POWER

Goodyear Compass Belting

IN standard cable drilling the problem of transmission belting is of vital importance to the maintenance of low costs.

The operation of alternately raising and dropping the heavy drilling tools throws the burden onto the transmission belts, which only the best belts can withstand successfully.

Because of convincing cost records in many fields we recommend as first choice for deep drilling duty our Compass frictioned-surface transmission belt.

It is especially adapted for oil well service because of the hard finish of the outside ply forming the cover, the thoroughly impregnated construction, and the exceptional flexibility which tremendously diminishes the destructive effect of clamping.

* * *

Drilling and pumping belting, valves, packer rubbers, swab rubbers, oil rings, rotary hose and packing—these mechanical goods for the oil fields show greater economy when they bear the mark of Goodyear.

The Goodyear Tire & Rubber Co.
Akron, Ohio

· PACKING · BELTING · HOSE · VALVES ·
GOODYEAR
AKRON

the striking of something of the gusher character, and thereby making good to the investor.

These companies organized on a basis running into millions of dollars have many thousands of acres under lease, especially in the Mid-Continent, Coastal and Kentucky fields, the results from which are necessarily problematical; some may be successful, others may not. In addition to the legitimate companies there are dozens of what they term blue-sky companies, without home or limit. In making investments the tenderfoot should learn to distinguish, through inquiry, between the legitimate, well conducted companies and those that are not, for ninety-nine out of a hundred of the latter will end in disaster. It is one of the strange attributes of man that he will put money into schemes that he instinctively knows are of the most hazardous speculative character; always willing to take that infinitesimal chance of the gamble.

In the "Pennsylvania Grade" districts most of the work will center in West Virginia and Southeastern Ohio, where the chances for wells of fair calibre are greater than in the old Pennsylvania state fields. In this latter district the old wells will be looked after carefully to get as much oil out of them as is possible. Many wells will, however, be pulled out as the material will be more valuable than the little production.

Lima-Indiana fields are being neglected and many wells are being abandoned and the stuff used elsewhere. These fields were never good stayers, as many of the old Pennsylvania operators who entered the field years ago found out to their sorrow.

The Mid-Continent district still has the productive pole and from that quarter most of the oil is expected to come for the needs of the world. The past three months have not been indicative of promise that it will be able to maintain its large output unless some new basin is soon developed. The wells now being brought in are of good size but they do not show the staying qualities of the wells found in the Cushing field; water is another detriment that is causing some alarm.

The total output of the entire Mid-Continent district has been holding up during the present year at 375,000 barrels per day. With plenty of money controlled by the big companies and thousands of acres under lease it goes without saying that every effort will be put forth to find all the oil lying hidden in mother earth's reservoirs and the possibilities, while indefinite, are great for something new to be developed.

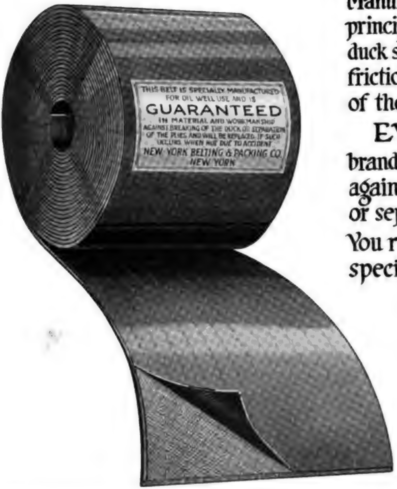
In the Kentucky field work will soon be under way that will tell the story in that district. Thousands of acres have been leased up by the active promoter and these leases are now being sold and floated throughout this wide country. So far most of the production in Kentucky has been derived from shallow wells mostly located in Estill and Wolf counties; naturally these wells are ephemeral in production and cannot be depended upon to hold interest in the field.

Deeper drilling may result in discovery of something more substantial so that this coming summer will go far towards showing what may be expected from that section of the United States.

The Coastal section of the country, at this time, shows the greatest activity of any part of the American fields. Goose Creek and Sour Lake are the attractive pools and excitement is running high.

The following from the "Gulf Coast Oil News" gives an idea of what is being

GUARANTEED
OIL WELL DRILLER BELT



Manufactured on scientific principles of extra heavy duck specially woven with friction uniting the plies of the greatest tenacity.

EVERY BELT

branded with *GUARANTEE* against breaking of duck or separation of plies.

You run NO RISK in specifying this belt.

SEVENTY YEARS
EXPERIENCE IN
BELT MAKING
BACK OF THIS
GUARANTEE

MANUFACTURED BY

NEW YORK BELTING AND PACKING CO.

New York, N. Y., 91-93 Chambers St.
Chicago, Ill., 124-126 W. Lake St.
Philadelphia, Pa., 821-823 Arch St.
San Francisco, Cal., 519 Mission St.
Spokane, Wash., 157 So. Monroe St.
St. Louis, Mo., 218-220 Chestnut St.
Pittsburgh, Pa., 420 First Ave.

accomplished in the Goose Creek field:

*Gulf P. Co.'s No. 1 Scorrega, 2910 feet deep; salt water.

*Gulf P. Co.'s No. 7 Stateland-Prod., 2662 feet deep; salt water.

*Gulf P. Co.'s No. 4 Wright-A, 2635 feet; salt water.

*E. F. Simms' No. 2 Hughes, 2600 feet; salt water.

*Republic P. Co.'s No. 1 Jones, 2635 feet; gas, 15 million feet.

Humble Oil Co.'s No. 1 Ashbel Smith, 2620 feet; 3000 (s).

Simms-Sinclair's No. 4 Hughes, 2750 feet; gas, 10 million feet.

Humble Oil Co.'s No. 6 Gaillard, 2600 feet; 1000 fluid, 10 per cent.

Gulf P. Co.'s No. 5 Briggs, 2610 feet; 500 feet.

Gulf P. Co.'s No. 7 Stateland-Prod., 2615 feet; to go on air.

Gulf P. Co.'s No. 3 Busch, 2400 feet; 3000 (sd).

Empire Gas & Fuel Co.'s No. 2 Adey, 2650 feet; 2500 fluid, 50 per cent.

*Staiti et al.'s No. 1 Duke, 3250 feet; 400.

*Gulf P. Co.'s No. 4 Beaumont Pet., 2600 feet; water.

Gulf P. Co.'s No. 4 Wright-A, 2650 feet; to go on air.

Gulf P. Co.'s No. 1 Mitchell, 2600 feet; 100.

Simms-Sinclair's No. 7 Gaillard, 1900 feet; junked.

Simms-Sinclair's No. 2 Hughes, 2640 feet; junked.

Simms-Sinclair's No. 4 Sweet, 2605 feet; 2000.

Simms-Sinclair's No. 3 M. Gaillard, 2630 feet; 2500.

Gulf P. Co.'s No. 9 Tabb, 2600 feet; 3000.

Gulf P. Co.'s No. 2 Rucker-Schlng, 2650 feet; 4000.

Gulf P. Co.'s No. 2 Hoffman-Gaillard, 2600 feet; 2000 fluid, 85 per cent.

Rucker's No. 2 Gdsn-McFarland, 2620 feet; 2000.

West Virginia Oil Co.'s No. 2 Dolan, 2850 feet; 6000.

Gulf P. Co.'s No. 1 Hoffman-Gaillard, 2600 feet; 2500.

Gulf P. Co.'s No. 3 Mitchell, 2600 feet; 500.

Simms-Sinclair's No. 5 M. Gaillard, 2650 feet; 10,000 (10 hours) (sd).

Gulf P. Co.'s No. 7 Churchill-Gaillard-A, 2890 feet; salt water.

*Gulf P. Co.'s No. 1 Scorrega, 3540 feet; salt water.

Simms-Sinclair's No. 3 Sweet, 2600 feet; gas, 15 million feet.

Humble Oil Co.'s No. 2 Gillette, 2600 feet; 100 on pump.

*Taken deeper. (s) Sanded up. (sd) Shut down. (wo) Worked over.

The following summaries from the *Oil City Derrick* shows the operations in the various fields for the month of March and totals compared with December, January and February:

	Comp.	Prod.
Pennsylvania	409	2,326
Lima-Indiana	42	600
Central Ohio	41	55
Kentucky	100	2,918
Illinois	66	1,165
Kansas	171	17,557
Oklahoma-Arkansas	415	22,821
Texas Panhandle	48	3,864
North Louisiana	41	1,220
Gulf Coast	101	41,865
Total January	1,434	94,391
Total December	1,545	96,813
Difference	111	2,422

	Rigs	Drg.
Pennsylvania	285	548
Lima-Indiana	16	67
Central Ohio	45	84
Kentucky	9	117
Illinois	13	71
Kansas	153	356
Oklahoma-Arkansas	290	1,259
Texas Panhandle	41	129
North Louisiana	59	106
Gulf Coast	51	194
Total January 31	962	2,931
Total December 31	859	3,078
Difference	103	147

	Comp.	Prod.
Pennsylvania	400	2,684
Lima-Indiana	40	658
Central Ohio	32	10
Kentucky-Tenn.	106	4,846
Illinois	46	790
Kansas	262	14,609
Oklahoma-Arkansas	501	32,836
Texas Panhandle	62	2,871
North Louisiana	45	1,945
Gulf Coast	105	43,790
Total February 28	1,599	105,219
Total January	1,434	94,391
Difference	165	10,828

	Rigs	Drg.
Pennsylvania	273	544
Lima-Indiana	19	70
Central Ohio	46	82
Kentucky-Tennessee	19	154
Illinois	11	68
Kansas	177	436
Oklahoma-Arkansas	317	1,444
Texas Panhandle	52	159
North Louisiana	58	99
Gulf Coast	62	223
Total February 28	1,033	3,279
Total January 31	962	2,931
Difference	71	348

	Comp.	Prod.
Pennsylvania	451	3,359
Lima-Indiana	61	942
Central Ohio	42	46
Kentucky-Tennessee	114	4,459
Illinois	40	384
Kansas	197	16,688
Oklahoma-Arkansas	347	27,666
Texas Panhandle	71	2,713
North Louisiana	36	4,066
Gulf Coast	131	63,715
Total March	1,490	124,038
Total February	1,599	105,219
Difference	109	18,819

	Rigs	Drg.
Pennsylvania	295	523
Lima-Indiana	14	76
Central Ohio	41	76
Kentucky-Tennessee	14	154
Illinois	7	65
Kansas	234	455
Oklahoma-Arkansas	396	1,376
Texas Panhandle	52	172
North Louisiana	63	104
Gulf Coast	71	209
Total March 31	1,187	3,210
Total February 28	1,033	3,279
Difference	154	69

PENNSYLVANIA FIELDS.

Summary of Completed Work.

	Comp.	Prod.
Allegany	10	25
Bradford	30	94
Middle Field	9	14
Venango-Clarion	79	106
Butler-Armstrong	29	69
S. W. Pennsylvania	47	949
West Virginia	141	1,147
Southeast Ohio	106	955
Total March	451	3,359
Total February	400	2,864
Difference	51	485

Dry 23, Gas 11.

Rigs and Wells Drilling.

	Rigs	Drg.
Allegany	13	9
Bradford	28	26

Middle Field	17	14
Venango-Clarion	15	44
Butler-Armstrong	19	24
S. W. Pennsylvania	44	93
West Virginia	124	215
Southeast Ohio	35	98
Total	295	523

Increase in rigs over February, 22.
Decrease in drilling wells, 21.
Net increase, 1.

Summary showing gross stocks and runs from wells of various pipe lines for month of March, 1917:

	Stocks	Wells
National Transit Co.	853,855.87	238,785.89
S. W. Pa. Pipe Line	531,093.16	135,533.40
Eureka P. L. Co.	1,463,337.42	649,088.18
Buckeye Pipe Line Co. (Macksburg)	520,162.73	296,616.81
Buckeye Pipe Line Co. (Lima)	2,430,787.28	185,900.65
Buckeye Pipe Line Co. (Cleveland)	1,069.37	3,036.12
Indiana P. L. Co.	810,047.43	18,515.77
Cumberland P. L.	222,802.06	171,324.75
Southern P. L. Co.	523,416.74	.....
Crescent P. L. Co.	112,813.55	.....
N. Y. Transit Co.	1,184,022.98	15,217.64
Northern P. L. Co.	795,802.25	.....
Total March 31	9,449,210.84	1,714,019.21
Total February 28	9,194,299.72	1,385,374.43
Difference	254,911.12	328,644.78

The following comparative summary of crude petroleum movement in February, 1917, represents the operations of 114 pipe line and refining companies which handle or receive oil from various productive fields east of the Rocky Mountains, and is compiled from reports received by the United States Geological Survey, Department of the Interior, prior to March 30, 1917.

This compilation includes statements filed by 34 companies operating in the Appalachian field, 9 companies operating in the Lima-Indiana field, 6 companies operating in the Illinois field, 43 companies operating in the Oklahoma-Kansas field, 8 companies operating in the Central and North Texas field, 3 companies operating in the North Lousiana field, 5 companies operating in the Gulf Coast field and 6 companies operating in the Rocky Mountain field:

Crude Petroleum Moved from Field Sources.

Barrels of 42 Gallons Each.

Field—	Feb. 1917	Feb. 1916
Appalachian	1,483,546	1,557,797
Lima-Indiana	239,204	281,696
Illinois	1,196,421	1,328,726
Oklahoma-Kansas	6,964,899	6,608,171
Central and North Texas	349,172	309,468
North Louisiana	241,224	396,805
Gulf Coast	666,860	928,467
Rocky Mountain	679,231	.....

Crude Petroleum Delivered to Refineries or Consumers.

Barrels of 42 Gallons Each.

Field—	Feb. 1917	Feb. 1916
Appalachian	2,105,744	2,191,804
Lima-Indiana	1,421,520	1,583,320
Illinois	567,782	677,068
Oklahoma-Kansas	4,546,461	6,762,331
Central and North Texas	643,218	267,206
North Louisiana	266,960	353,658
Gulf Coast	513,550	659,194
Rocky Mountain	744,412	.....

Stocks of Crude Petroleum at End of Month.

Barrels of 42 Gallons Each.

Field—	Feb. 1917	Feb. 1916
Appalachian	6,422,877	7,352,440
Lima-Indiana	2,006,784	4,688,212
Illinois	5,611,312	8,664,106
Oklahoma-Kansas	39,433,816	37,681,123
Central and North Texas	1,030,126	3,680,825
North Louisiana	97,380	272,229
Gulf Coast	4,503,095	4,144,771
Rocky Mountain	799,326	.....

Striking are the comparisons between February, 1916, and February, 1917, which indicate that the scattered pools in Central and North Texas and Wyoming are the only ones that are now yielding more oil than they did a year ago, and that outside the Gulf Coast and Oklahoma-Kansas fields stocks of crude oil are materially less than at the end of February, 1916.

Always on "High"

In the Mountains or on the Avenue

STANDARD

The Magneto Equipped "Eight"

Brute force and Beau Brummel blent into one — with distinction in every inch of its fleet wedge of a body.

That, plus perfect obedience, so that a woman drives with ease.

This powerful magneto-equipped Standard "8" is ready always for sharp grades and rough going. Trials that grind less rugged cars into submission are a frolic for this impetuous, eight-lunged, ruly beast of a car.

You will be keenly grateful for this strong car's frame and springs, where steel-making at its level best guarantees your security and your comfort. You'll find its rugged 127 inches of wheel-base superior to all emergencies of strain and stress.

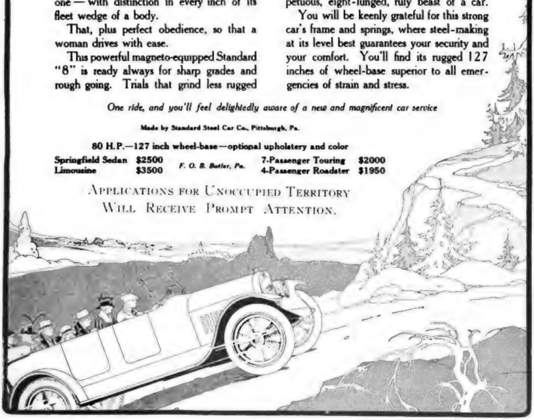
One ride, and you'll feel delightedly aware of a new and magnificent car service

Made by Standard Steel Car Co., Pittsburgh, Pa.

80 H.P.—127 inch wheel-base—optional upholstery and color

Springfield Sedan	**$2500**	*F. O. B. Butler, Pa.*	**7-Passenger Touring**	**$2000**
Limousine	**$3500**		**4-Passenger Roadster**	**$1950**

APPLICATIONS FOR UNOCCUPIED TERRITORY
WILL RECEIVE PROMPT ATTENTION.



STANDARD STEEL CAR COMPANY

PITTSBURGH, PA.

The total crude oil stocks, summarized, for Februarys, follows:

Grade of Oil—	Total Bbls.
Pennsylvania	3,160,091.69
Lima	1,558,128.60
Kentucky	44r,585.35
Illinois (Eastern lines)	1,068,791.27
Illinois (Illinois P. L.)	2,847,354.18
Mid-Continent (Eastern lines)	3,317,728.44
Mid-Cont. (Prairie O. & G.)	39,000,000.00
Mid-Continent (Prairie P. L.)	1,000,000.00
Mid-Cont. (Magnolia P. L.)	5,692,594.00
Mid-Cont. (Gulf P. L.)	5,533,000.00
Mid-Cont. (The Texas Co.)	7,543,099.00
Mid-Cont. (Carter Oil Co.)	18,900,000.00
Mid-Cont. (Outside lines)	4,760,000.00
Total February 28	94,830,372.53
Total January 31	95,167,956.80
Decrease	337,584.27

The above figures do not include approximately 12,000,000 barrels held in private storage on tank farms and leases in the Mid-Continent field, notably Cushing, Healdton, and Kansas.

The apparent estimated production of the fields of the Mid-Continent at the close of the past week was as follows: Caddo, 23,570 barrels; Electra, 24,000 barrels; Corsicana light and Thrall, 1,000 barrels; Kansas, 69,000 barrels; Oklahoma, outside of Cushing, Shamrock and Healdton, 120,000 barrels; Cushing and Shamrock, 72,000 barrels; Healdton, 59,000 barrels; total, 368,570 barrels.

The estimated daily production of heavy gravity oil in the Gulf Coast field was 85,575 barrels; Corsicana heavy, 500 barrels.

The following table shows the runs, shipments, and stocks of the Prairie Oil & Gas Co., and the Prairie Pipe Line Co. for the Mid-Continent field for the year:

1915	Runs	Shpmts.	Stocks
May	2,790,000	3,941,639	42,000,000
June	2,100,000	3,576,520	41,500,000
July	2,790,000	3,568,185	42,000,000
August	2,945,000	3,790,903	44,000,000
Sept.	2,700,000	3,821,049	45,000,000
October	2,225,000	3,870,362	45,000,000
November	2,550,000	3,763,745	44,000,000
December	2,790,000	3,727,092	41,000,000
1916			
January	2,945,000	3,818,266	43,000,000
February	2,755,000	3,265,362	42,000,000
March	2,976,000	3,382,694	41,250,000
April	2,976,500	3,422,450	41,300,000
May	3,100,000	3,503,737	41,100,000
June	3,150,000	3,571,545	42,200,000
July	2,418,000	3,653,549	41,350,000
August	2,431,000	3,689,128	40,200,000
Sept.	3,000,000	3,699,973	40,200,000
October	3,255,000	3,892,000	40,000,000
November	3,360,000	3,691,269	40,500,000
December	3,379,000	4,056,980	40,250,000

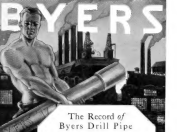
While the production of California for January, February and March of this year has been running along at about the same figures, the draft on stocks continues unabated, reaching approximately 4,000,000 barrels for the first three months of this year. The daily production is about 260,000 barrels. The total stocks April 1 amounted to 40,000,000 barrels.

The Kentucky field is undergoing a mud blockade that has almost suppressed operations. The roads are at the impassable point and it will require some real spring weather to put the roads in condition for moving of material into the hilly country.

Wildcatting on a scale never before witnessed in Old Kentucky will be prosecuted in the untested territory of Estill and adjoining counties, along the geological line toward West Virginia on the northeast.

The field has approximately 10,000 barrels production per day in sight. The pipe lines are running close to 7,000 barrels. The runs from the various districts for the week ending April 14 is herewith attached:

District—	Runs Bbls.
Busseyville	750.07
Cooper	878.22
Denney	797.90
Steubenville	798.21
Lewis	179.27
Fitchburg	5,020.88
Ravenna-Irvine	24,197.86
Stillwater	301.16
Campton	205.76



The Record *of* Byers Drill Pipe

In the Houston district one operator, using Byers drill pipe for the first time, has used one string of it for drilling fourteen wells, each from 2500 to 3000 feet deep, without a single failure so far. From every part of the oil and gas fields similar records are scored with

The NAME and YEAR is rolled in every length

Genuine Wrought Iron
- Drill Pipe
- Casing
- Tubing
- Line Pipe
- Drive Pipe

BYERS GENUINE WROUGHT IRON PIPE

FULL WEIGHT GUARANTEED

The reason lies, first, in the nature of the iron used in all Byers tubular goods. This iron is produced under Byers control from ore mines to the finished product, and is hand puddled and rolled into skelp without the addition of scrap of any kind.

The resulting iron is tough and fibrous, the fibre giving to the pipe its wonderful resistance to vibratory and torsional stresses which so quickly cause crystallization and fracture of other pipe.

Secondly, the Byers practice of finishing the pipe insures welds which are as strong as the metal itself, and joints especially designed to withstand the severest physical stresses.

Where corrosion is a factor, as with casing, line pipe and tubing, Byers pipe possesses all the advantayes which have made the old time iron famous for its rust resistance.

A. M. BYERS COMPANY
ESTABLISHED 1864
PITTSBURGH, PA.
NEW YORK CHICAGO BOSTON
LOS ANGELES HOUSTON

Wagersville	7,402.08
Beaver Creek	313.06
Ragland	755.36
Parnleyville	757.02
Ashley	5,442.75
Total	47,889.59
Daily average	6,841.37

The following table shows the amount of crude petroleum held in storage by the several pipe lines mentioned in the different divisions of the oil fields, and the amount of each grade at the close of business March 31, 1917:

Grade of Oil—	Total Bbls.
Pennsylvania	3,189,218.12
Lima	1,721,968.31
Kentucky	443,485.89
Illinois (Eastern lines)	813,278.04
Illinois (Illinois P. L.)	2,167,501.54
Mid-Cont. (Eastern lines)	3,559,677 50
Mid-Cont. (Prairie O. & G.)	38,400,000.00
Mid-Cont. (Prairie P. L.)	1,000,000.00
Mid-Cont. (Magnolia P. L.)	5,790,000.00
Mid-Cont. (Gulf P. L.)	5,503,000.00
Mid-Cont. (Texas Co.)	7,700,000.00
Mid Cont. (Carter Oil Co.)	18,700,000.00
Mid-Cont. (Outside lines)	4,698,000.00
Total March 31	93,686,135.40
Total February 28	94,830,372.53
Decrease	1,144,237.13

The following table shows the condition of the stocks in the same lines and companies at the close of business on February 28, 1917:

Grade of Oil—	Total Bbls.
Pennsylvania	3,160,091.69
Lima	1,558,128.60
Kentucky	449,585.35
Illinois (Eastern lines)	1,068,791.27
Illinois (Illinois P. L.)	2,847,354.18
Mid-Cont. (Eastern lines)	3,317,728.44
Mid-Cont. (Prairie O. & G.)	39,000,000.00
Mid-Cont. (Prairie P. L.)	1,000,000.00
Mid-Cont. (Prairie P. L.)	5,692,594.00
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Mid-Cont. (The Texas Co.)	7,543,099.00
Mid-Cont. (Carter Oil Co.)	18,900,000.00
Mid-Cont. (Outside lines)	4,760,000.00
Total February 28	94,830,372.53
Total January 31	95,167,956.80
Decrease	337,584.27

During March there was a reduction of 1,144,237 barrels in stocks, of which 637,693 barrels was reported from the Mid-Continent field, and 679,847 barrels by the Illinois Pipe Line. Stocks held by the Eastern lines showed an increase of 173,302 barrels. The grades of all the Eastern stocks were increased with the exception of Illinois and Kentucky, the changes in each one being small. It is estimated that besides the amounts represented in the above table there are 12,300,000 barrels held on private tank farms and leases in Cushing, Healdton and Kansas fields.

STANDARD OIL SUBSIDIARIES.

	Bid	High
The Atlantic Refining Co.	950	1000
Borne-Scrymser Co.	440	540
Buckeye Pipe Line Co.	103	123
Chesebrough Mfg. Co.	420	1025
Colonial Oil Co.	50	175
Continental Oil Co.	540	585
Crescent Pipe Line Co.	39	48
Cumberland Pipe Line Co.	160	160
Eureka Pipe Line Co.	205	255
Galena-Signal Oil Co., pref.	138	148
Galena-Signal Oil Co., com.	150	204
Illinois Pipe Line	224	250
Indiana Pipe Line Co.	100	115
National Transit Co.	17	36
New York Transit Co.	195	235
Northern Pipe Line Co.	100	120
Ohio Oil Co.	350	400
Pierce Oil Corporation0	13¾	17¾
Prairie Pipe Line Co.	300	345
Prairie Oil & Gas Co.	550	660
Solar Refining Co.	350	410
Southern Pipe Line Co.	203	228
South Penn Oil Co.	300	620
Penn-Mex. Fuel Co.	50	72
Southwest Penn. Pipe Lines	110	129
S. O. Co. of California	278	388
S. O. Co. of Indiana	800	890
S. O. Co. of Kansas	515	570
S. O. Co. of Kentucky	385	835
S. O. Co. of Nebraska	560	587
S. O. Co. of New York	290	284
S. O. Co. of Ohio	460	630
Swan & Finch Co.	100	150
Union Tank Line Co.	92	103
Vacuum Oil Co.	380	400
Washington Oil Co.	30	54
Anglo-American Oil Co.	16¾	18
S. O. Co. of New Jersey	650	715

Other Oil Stocks.

	Bid	Ask
California Petroleum	....	21¾
Mexican Petroleum	....	88¾
Texas Co.	....	213½

Pierce Oil	13	13½
International Petroleum	14½	15
Osage	8⅝	9
Barnett Oil & Gas	2¾	2⅞
Cosden Co.	13¾	13¼
Cosden Oil & Gas	13	13¼
Cosden Oil & Gas, pref.	4½	4⅝
Federal Oil	5¾	5⅞
Houston Oil	22¼	22¾
Morritt Oil	23½	24½
Midwes Oil, com.	77	79
Midwest Oil, pref.	102	104
Oklahoma Oil	9½	10
Oklahoma Prod. & Refg.	10⅜	10½
Sapulpa Oil & Ref.	10⅜	10⅝
Sinclair Bonds	110	110¼
Tidewater	190	192
Victoria Oil	1⅛	1 3-16
Wayland Oil & Gas	4	4¼

The prices paid for oil of various grades by the purchasing agencies, on April 14, are:

Pennsylvania	$3.10
Mercer Black	2.45
Corning	2.40
Cabell	2.37
Somerset	2.20
Ragland	1.00
North Lima	1.88
South Lima	1.88
Wooster	2.10
Plymouth	1.83
Princeton	1.90
Illinois	1.92
Kansas and Oklahoma	1.70
Yale	1.70
Indiana	1.78
Healdton	.90
Corsicana Light	1.70
Corsicana Heavy	.85
Electra	1.70
Henrietta	1.70
Thrall	1.70
Strawn	1.70
Moran	1.70
Crichton	1.40
De Soto	1.80
32 deg. to 34.9 deg. Gravity Caddo	1.75
35 deg. to 37.9 deg. Gravity Caddo	1.80
38 deg. and above gravity Caddo	1.90
Caddo Crude	1.00
Canada	2.23

CALIFORNIA CRUDE QUOTATIONS.

Effective November 21, 1916, Standard Oil Company offers the following prices for crude oil at the well:

San Joaquin Valley Fields.

(Kern River, Midway-Sunset, McKittrick, Lost Hills-Belridge, Coalinga.)

14 deg. to and including 17.9 deg. gravity, $0.73; 18 deg. to and including 18.9 deg. gravity, $0.74. And for each increase in gravity of one (1) full degree above 18.0 deg. gravity, up to and inclusive of 24.9 deg. gravity, one (1) cent per barrel additional.

25 deg. to and including 25.9 deg. gravity, $0.82. And for each increase in gravity of one (1) full degree above 25.0 deg. gravity, up to and inclusive of 36.9 deg. gravity, two (2) cents per barrel additional.

37 deg. to and including 37.9 deg. gravity, $1.07. And for each increase in gravity of one (1) full degree above 37.0 deg. gravity, three (3) cents per barrel additional.

Ventura County.

25 deg. to and including 25.9 deg. gravity, $$0.82. And for each increase in gravity of one (1) full degree above 25.0 deg. gravity, up to and inclusive of 36.9 deg. gravity, two (2) cents per barrel additional.

37 deg. to and including 37.9 deg. gravity, $1.07. And for each increase in gravity of one (1) full degree above 37.0 deg. gravity, three (3) cents per barrel additional.

Whittier-Fullerton and Santa Maria Fields.

16 deg. to and including 17.9 deg. gravity, $0.73; 18 deg. to and including 18.9 deg. gravity, $0.74. And for each increase in gravity of one (1) full degree above 18.0 deg. gravity, up to and inclusive of 24.9 deg. gravity, one (1) cent per barrel additional.

25 deg. to and including 25.9 deg. gravity, $0.82. And for each increase in gravity of one (1) full degree above 25.0 deg. gravity, up to and inclusive of 36.9 deg. gravity, two (2) cents per barrel additional.

37 deg. to and including 37.9 deg. gravity, $1.07. And for each increase in gravity of one (1) full degree above 37.0 deg. gravity, three (3) cents per barrel additional.

On April 16 the Ohio Oil Co. added 5 cents to the price of Lima (North and South), Indiana, Wooster, Illinois and Princeton.

On April 17 Pennsylvania Grade oil received a boost of 5 cents and Mercer Black, Corning, Cabell, and Somerset (Kentucky oil) each 2 cents.

DRESSER ALL STEEL COUPLING, Style 38

OIL WILL WASH YOUR SINS AWAY.

By J. L. Hunter.

Say, stranger, if you'll sit down,
I'll tell the story of this 'ere town,
For I've bin here these forty years,
Well, ever since old Jakey Beers
Got tired of raisin' beets an' hops
An' laid a medder out in lots.
The people came an' snaffled on
To them 'ere lots 'till all were gone,
An' each one built hisself a shack
Facing the road with garden back.
What one did know the others did,
As secrets never were kept hid.
If Susan Bigsby had a beaux,
We 'lowed he werent so an' so,
An' if a girl did stop to talk
With her best feller on the walk,
Some said she was a brazen elf,
With little respect for herself.
An' when a drummer came around
From every window in the town,
Appeared a head with towsy hair
And every eye on him did stare.
When Melda Shorts wed Sammy Blatt,
Some 'lowed this and others that,
An' so it run along until,
Abe Thomson came and with a drill
He bored a hile deep in the ground
An' there both oil an' gas he found.
The men quit loafin' at the store,
Nor in the church was heard their snore,
For all were talkin' oil an' gas,
From Daddy Jones to Granny Vath,
An' lowed beneath their patch of soil,
Did lay a sea of amber oil.
Say, stranger, if you'd have happened 'long
When drillin' was agoin' on,
You'd said that Satan had been 'round
An' traded Hades for our town,
'Cause whiskey shops an' gamblin' dens
Were thicker than a flock of hens,
An' girls from somewhere, I don't know,
Thin clad, did wonder to an' fro.
The wells begin a comin' in,
An' soon we all had gobs of tin;
Then begun a building boom,
An' now we had to have more room
For shops an' factories where men toil,
You see what comes from strikin' oil.
An' now the girls go flittin' by,
An' no one asks the reason why
They wear their dresses to their knees,
An' laced so tight are 'fraid to sneeze.
Sam Blatt can leave his wife at home
An' with some other female roam,
For it is written in this day,
That oil will wash your sins away.

GASOLINE STANDARD NOT PROBABLE.

Due to the serious situation regarding the gasoline supply, it is not believed likely that the government bureaus at Washington, will at this time specify any gasoline standards. Any specification that would retard the output or restrict the sale at this time would not be very good policy. This it is believed will be the view taken by the bureau officials at Washington. The supply at present is limited, and the demand too great to justify the adoption of any rules that might in any way serve as a detriment to a greater output. Besides, too little is known about what is good gasoline and what is not, outside of the present specifications, based particularly on gravity. A high or low gravity product is generally conceded to explain enough about the product to satisfy commercial needs. And in this respect the tendency is towards lower gravity. The lower the gravity the greater the output will be and the gasoline user should be educated up to a point where he will see the advantage of using the lowest grade possible consistent with good results. This, of course, again reverts back to the engine manufacturers. What is desired is an engine that will use the lowest grade fuel possible.

In all probability the Bureau of Mines will publish a paper on the subject of specifications and gasoline in general, but as stated above it is not likely that specifications will be recommended.

SCENE IN THE CUSHING FIELD, OKLAHOMA.
(One Mile South of Oilton.)

NEW PUBLICATION.

"Oil Field Development and Petroleum Mining," by A. Beebe Thompson, a prominent English writer and practical engineer.

The work contains a well written account of the oil fields of the world, accompanied by specially prepared maps.

Oil phenomena have been minutely described. The principles of refining are touched upon briefly as also custom and usage. The work contains a detailed index which adds much to the book's value.

All oil libraries should have this interesting and useful up-to-date publication. 700 pp., 158 ills., 8 col. maps. Net price $7.50. D. Van Nostrand Co., 25 Park Place, New York City.

John H. Galey, of Pittsburgh, Pa., was in Tulsa, Okla., in March, just reminiscing around. The pioneer wildcatting oil firm of Guffey & Galey is known wherever there is oil throughout the United States. Both Mr. Galey and Col. Jim Guffey are now 87 years of age. Col. Guffey lives very quietly in Pittsburgh, but Mr. Galey cannot resist the temptation to get out into the oil fields occasionally.

Changes in the Price of Oil

The following table, furnished by W. C. Coles & Co., 61 Broadway, New York, N. Y., gives the highest and lowest price paid for oil, each year, since 1860:

Year	Highest	Lowest	Year	Highest	Lowest
1860	$20 00	$ 2 00	1888	1 00	71⅝
1861	1 75	10	1889	1 12½	79½
1862	2 00	10	1890	1 07⅞	60⅝
1863	4 00	2 00	1891	81⅝	50
1864	14 00	3 75	1892	64½	50
1865	10 00	4 00	1893	80	62⅞
1866	5 00	1 65	1894	95⅝	78½
1867	4 00	1 50	1895	2 69	94½
1868	5 50	1 80	1896	1 50	90
1869	7 00	4 25	1897	96	65
1870	4 90	2 75	1898	1 19	65
1871	5 15	3 40	1899	1 66	1 13
1872	4 10	3 00	1900	1 68	1 05
1873	3 05	1 00	1901	1 30	1 05
1874	1 90	45	1902	1 54	1 15
1875	1 65	90	1903	1 90	1 50
1876	4 23½	1 48¾	1904	1 85	1 50
1877	3 70	1 53¾	1905	1 61	1 27
1878	1 87½	78¾	1906	1 64	1 58
1879	1 28¾	63½	1907	1 78	1 58
1880	1 24⅜	71¼	1908	1 78	1 78
1881	1 01¼	72½	1909	1 78	1 43
1882	1 35	49¼	1910	1 43	1 30
1883	1 24¾	83¼	1911	1 35	1 35
1884	1 15⅝	51¼	1912	2 00	1 30
1885	1 12⅝	68	1913	2 50	2 00
1886	92¼	60	1914	2 50	1 45
1887	$ 90	$ 54	1915	2 25	1 35
			1916	2 60	2 25

Notice to Our Subscribers

This Magazine is published in January, April, July and October of each year.

It is intended, especially, as a book for reference in all matters concerning the Oil and Gas business, and we are glad to receive items from friends regarding the same.

The attention of the advertising public is called to the particular advantages our Magazine possesses as a medium between them and the general public, combining, as we do, the romance of the business with the sterner, drier facts and figures which necessarily go with it.

If you like the Magazine, speak to your friends about it; if you have any criticisms to offer, or improvements to suggest, call our attention to them. Each number will be complete in itself. Our usual high standard will be maintained.

Copies of this Magazine may be found on file in the British Museum in London, England, and the New York Public Library, 42nd St. and 5th Ave., New York City.

The price to subscribers is $1.50 for two years; single copies, 20c. Foreign subscribers will add, for Canada 24c, and for all other countries 40c for postage.

THE OIL AND GAS MAN'S MAGAZINE.
Editor and Manager.....Charles H. Oliver
Assistant Manager.....John L. Hunter
Owner.....Charles H. Oliver
Publishers....Citizen Printing Co., Butler, Pa.


OHIO RIVER DISASTER STEAMBOAT KANAWHA 1 4 1916
PHOTO.

EVANS MFG. CO. SPECIALTIES

Fifteen years' experience in making Evans Balls and Seats has taught us how to produce a perfect article that is standing the test that hardest service can give.

It takes time to develop perfection in any product and the satisfaction that the Evans Balls and Seats are giving our customers is proof of quality and our best reasons why YOU should use them and save money.

Each ball is ground to the special seat with which it is boxed.

Seats are ground both before and after tempering to insure a perfect seat.

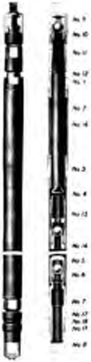
Inspection both of seating and roundness of ball is made before boxing.

THE PLUNGER LINER

The Plunger Liner was designed for use on wells bothered with sand. It can also be used in any place that cup valves are used but is especially useful in pumping a sandy well.

It consists of an outside steel case with a standing valve screwed in the lower end and a stuffing box on upper end. A polished steel plunger works through the stuffing box. The plunger has a valve on the lower end and also on the top. A shoulder at the lower end of stuffing box supports it in the working barrel while two extra large cups on the lower end hold it securely while pumping.

This outfit is extensively used by large operators through Penna., Ohio and West Virginia and has always given success. **Numerous Instances of Wel's** that cut cups in one week, have run two months and more with the Plunger Liner.



Plunger Liner

THE CUP LINER

Our Cup Liner is known as the greatest fuel saver ever invented for pumping oil wells. This Liner is made of steel or brass barrel with cup valves. This you can pull out in the same way as Plunger Liner, all parts come out with barrel.

You can run your well with one-fourth less steam. Cups do not wear out, as barrel is made perfectly smooth.

These Liners are made with 3½ foot and 4 foot Barrels.

Cup Liner

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We manufacture Iron Tanks in any size from 5 to 100 barrels. Also Iron Tool Boxes superior to any on the market, made of No. 14 gauge blue annealed steel; self-supporting lid is of No. 12 annealed steel; size 24x26x65; weight 235 pounds; has sliding till for small tools. We do all kinds of sheet iron work, make stacks, etc.

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EVERY KIND OF SHEET METAL WORK

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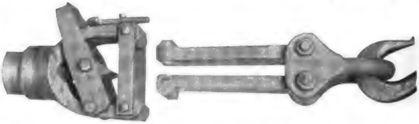
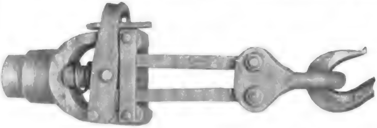
JARS AND BITS THAT WILL
GIVE SATISFACTION.

Don't Give Up That Apparently Hopeless Casing Pulling Job.



THE ACME CASING KICKER



will bring the Casing when all other means have proved failures.

ACME FISHING TOOL CO.

G. L. McKAIN, Manager.
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22nd Annual Convention Outing—August 19, 1924.

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FRANKLIN, PENNSYLVANIA.

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Guaranteed to be the most economical and satisfactory lubricants made, and the consumption of GALENA OIL per mileage will be less than by any other lubricant, thus it saves its cost in actual money saved in lubrication and saving of time consumed in lubrication.

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CHARLES SELLERS, Chairman.

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Please refer to home office for further particulars.

Index to Advertisers

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CONTENTS

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Address All Communications to THE OIL AND GAS MAN'S MAGAZINE, BUTLER, PA.

SINNER AND SAINT

.....OR.....

THE ROGUE'S MARCH TO HEAVEN

Being an Authentic Account of the Life of Ben Hogan, Desperado and Divine.

BY A. LIBRY BOOKMAN.

BEN HOGAN, AS HE APPEARED IN 1878.
From a pen and ink drawing by Floyd Colwell, Artist.

The curious manner in which several members of my immediate family and, finally, I myself became associated with both the criminal and christian career of Mr. Benedict Hagan, better known as Ben Hogan, a celebrity of the original oil fields of Pennsylvania, form a chain of episodes linking the youth and the old age, the evil and evangelism of the man in such a dramatic way that the use of them as an introduction to an authentic story of his career and adventures as

related by himself in various publications long since out of print, and accidentally discovered but recently, may may add additional interest to a remarkable personality, or, if such is not the case, will certainly divert the reader and, by their apparent irrelevancy, puzzle first and then surprise.

These episodes are sufficiently mystifying to nicely enframe the portrait, self-painted, of Mr. Hogan a mystic himself, who on the 1st day of November last, being 87 years of age and in the odor of sancity was discharged from the fleshly prison house of bodily existence. The ancient pleasure-loving Kings of France would, doubtless have knighted him for the noblesse oblige, that is to say the gracious condescension he manifested towards the ladies and gentlemen of the oil country in furnishing them with opportunities and rendezvous whereby and wherein to enjoy mutual companionship. The old days of the petroleum districts were forlorn, solitary and barren in the social aspect at least. Mr. Hogan did his best to relieve the loneliness and dreariness of the mateless nights. This endeavor was his first great mission. The ever adorable Eve was by him brought to the wifeless Adams of the homeless oil districts. For this work some blessed him while others cursed him. Far be it from me to decide which was right and which was wrong. Of a sudden he abandoned the harems. The perplexed Sultans and Sultanas were dumbstruck when he quickly reappeared among them proclaiming salvation by the cross. They could not understand the lightning like change from procurer to preacher, neither could the world at large. Alas, that such is often the case! Alas that even the Popes of Rome hesitate to cannonize some who make the same marvelous change! The drafting of the 'Wickedest Man in the World' was a selective conscription of such a nature that there seems to be something miraculous in it. The enrollment under the banners of the captain Christ was as sudden as the service thenceforth was unwavering and the sacrifice unequalled.

But, to return to the episodes and relate them in the order of their occurrence, the first being what we of the Bookman circle were in the habit of referring to as 'The Rape of the Books,' the story thereof being as follows:

For over two centuries the Bookmans, son succeeding father always, had been clergymen by profession and students by inclination. The family was a prayerful one and consequently very poor. This fact disturbed no one but my Uncle Peter who was early suspected of disbelief, yes of a tendency to atheism. He was continually criticising the devotional habits of my father and mother who were always ready, on the least provocation or the slightest opportunity, to bend 'the knee.' Uncle Peter took pleasure in saying that if the Bookmans had prayed less and worked more they would have been better off in the good things of the world. Prayers raised no potatoes, he often remarked, nor did they ever stop the shells from the cannons of Napoleon. This shocking modernism always seemed to me to be a remarkable thing, the declaration preceeding by so many years the thundering reverberations of the Kaiser's guns, which today are wrecking cathedrals filled with devotees calling aloud, and calling in vain for 'proctection from the enemy.' 'Neither wealth nor potency comes from prayers' Uncle Peter would continue. 'Toil, work, sweat is the source of both. Exploitation is the thing—exploitation either of the earth or man. For two

hundred years the Bookmans have prayed, and what have we today? Nothing, nothing save dyspepsia and a library filled with books, books and nothing but books.'

All of which, though unpleasantly expressed, was very true. The poorer the house became generation by generation, the fatter the library grew. Instead of turning marriage and burial fees into good things to eat and drink, nurturing the body and sustaining the soul, all revenues found their way into the shelves. This library spendthriftism had its natural result. The whole neighborhood knew of the richness of our library. It was a bad neighborhood, abounding in men and women of evil practices. Thefts and larcenies were numerous and murders common. We were warned more than once that the library would be looted some time or other, and the warning was followed by the fact. One midnight there was a burglarious visitation of our home through a window which opened out upon the roof of a porch. This window was pried, or 'jimmied' open; the library room was entered, and then there the 'Rape of the Books was consummated. This violation consisted of the deflowering of the most rare and valuable volumes of the illustrations they contained. These engravings were the work of masters of the craft and, today, would bring a handsome sum if auctioned on the Avenue. Fully a wagon load of wood-carved masterpieces, mostly of a religious nature, were carried off by the intruder or intruders. The blow was a fearful one to my father, who soon sickened and died. The poor man could never admit that the matter was one of theft pure and simple. He suspected the deed was that of some mad and envious rival in his own profession. There could be no profit in stealing mutilated engravings he would argue. No one would purchase such plunder, and no one could make use of the same. Therefore the affair was the manifestation of malice, pure, sinful and jealous malice! That any one could envy or hate him so, staggered him, and, as my mother told me, directly caused his death.

MRS. BEN HOGAN
"French Kate," Who Converted Hogan.
From a pen and ink drawing by Floyd Colwell, Artist, New York City.

The mystery of the thing was, in the course of a week or so, solved by Uncle Peter's episode of th 'Lifting of the Diamond Cross,' the tale of which is handed down in our annuals in this manner:

Strolling idly along the waterside one day, Uncle Peter's attention was of a sudden centered upon the figure of a very attractive lady who, strange to say, seemed to be sauntering along the same path as he himself was and in the same direction also. This lady was of buxom

proportions and her charms were like sweet waters to the eagle eyes of Uncle Peter. These eyes surveyed the blessed damsel from lace frilled skirts to bonnet topped with wings of the Bird of Paradise. Nothing rare, and nothing fine, or sweet or gay escaped the searching glance of the appreciator of the eternal feminine. A perfect creature she was and, evidently, a woman of wealth and position. A chain of gold was about her neck which was white and beautiful as the ivory tower to which Solomon, lord of the harem at Jerusalem, compared the neck of his own beloved. To the end of this chain was suspended the 'Cross of Diamonds', so noted in our history. On went the lady with seductions in her walk and grace in her carriage, and behind her followed my Uncle Peter, not knowing why, perhaps, but truly urged by fate. The lady stopped of a sudden before a wagon standing by the curb, to which wretched wagon the remnants of what was once a horse was hitched with ropes and patched-together leathers. On the seat of this wagon was perched a boy, a strong, blustering chap, with long black hair, bright, cunning eyes and unusually heavy chin for one so young. In a voice distinctly German in accent, he was inviting the passers-by to stop and look at his collection of wonderful wood engraved illustrations depicting bible characters and biblical happenings. The price for the inspection was two cents a person, and satisfaction was guaranteed or money refunded. The lady produced the fee required, and my Uncle Peter did likewise. It is needless to say that the illustrations were the very ones carried off from our library the night of the 'Rape of the Books.' Uncle Peter recognized such to be the case the moment the lady held up for inspection the print representing Delilah cutting off the locks of Samson. She seemed to enjoy the contemplation so much that Uncle Peter forgot all about 'the Rape' and embraced the occasion to praise the artist who had executed such a finished work. He further observed, he afterwards told me, that Delilah was truly a fascinating creature if she was as lovely as the artist represented her to be. The lady said something about having doubts on the matter for 'women are always overappreciated by idealists, she said, and remarked that Samson was a truly magnificent man, being a muscular man and having such abundance of beard and hair. Thus naturally began an interchange of views, Uncle Peter maintaining that all women are beautiful, some, of course, being more so than others; while the lady declared that men, manly men like Samson, were entitled to fulsome adoration. While this interchange was preceeding, a man whom Uncle Peter recognized as a local thief and bad character, approached the twain, pretending to trip, and fell, as if by accident, upon the lady. The gold chain was wrenched from the lovely neck and with it went the Cross of Diamonds. In an instant Uncle Peter was upon the culprit, and in another instant a knife was thrust into his bowels and he fell bleeding upon the ground. The lady after the first shock of surprise had passed, succored him as best she could; staunching his wound with her handkerchief and encouraging him with consoling words. The last seen of the thief was his lifting up the cross from a distant corner, as if signalling to the boy in the wagon, who instantly drove off in the same direction the thief had taken, no doubt responsive to the signal.

The final result of this incident was that Uncle Peter married, following his recovery, the lady who in losing the cross

obtained 'a gem of a husband' as she always liked to say. Thus did Aunt Clementine come into our family. She was from Pennsylvania it turned out and quite independent, owning an acreage of some extent adjoining the Desmene then, as now called the 'Fox estate' and upon which the feudal town of Foxburg was built—a town which is, indeed, an anomaly in a democracy as will hereafter appear.

The result of this 'Lifting of the Diamond Cross' and the fortunate alliance of Uncle Peter and Aunt Clementine was, that once a year at least my mother, now a widow, was invited to spend a month or so in the wilderness. This opportunity she was glad to embrace herself of, and she invariably took me along with her, first in her arms as a baby, and then in her lap as a child. The journey was a hard and long one in the early days. The conveyance was by private coach, over mountains and through dense forests. I remember well that we were always cheered up when we came to Parkers Landing, the final lap in the journey, and the Parker boys, great strapping fellows, ferried us across the Allegheny. I often wondered afterwards just how Aunt Clementine escaped being fascinated by Eph Parker, as Samson-like chap as I ever saw. Such was the episode of the Diamond Cross and such was the result thereof.

Some fifteen years thereafter, or to be chronologically exact, in the summer of 1865, I made my never to be forgotten journey to the oil regions. I was about seventeen years of age at the time and was mightily impressed with what I saw and heard. With Uncle Peter I visited Pithole and the other towns in and near that city. I distinctly remember visiting a gymnasium at Pithole where Uncle Peter told me he was in the habit of taking light exercise when in the neighborhood, as he often was. It was a long, barnlike structure, one story in height. What surprised me most was the fact this gymnasium, whose proprietor was named Ben Hogan I was told by Uncle Peter, had numerous women customers. These ladies wore short skirts and made an elaborate display of arms and shoulders. I think this fact was impressed upon my youthful mind because when we finally returned to Foxburg, Aunt Clementine questioned me as to just what the light exercise which Uncle Peter was so infatuated with, consisted of. I told her I saw lots of clubs and boxing gloves and the other paraphenalia of a gymnasium, but as to the exercise itself I knew nothing. The men seemed to be talking to the ladies all the time, singing strange songs and quaffing some sort of bubbling stuff taken from dark blue bottles. To my surprise Aunt Clementine burst into tears when I finished. This made me feel very badly for I loved her dearly, she being such a kind and noble woman. Uncle Peter took me aside and told me that I must never forget to say when Aunt Clementine asked questions about the gymnasium that the exercise was of a strictly private nature, being bodily only, and was never publicly indulged in. This I promised to do though I did not understand just what was meant by Uncle Peter.

The next year when I returned to Foxburg, Aunt Clementine informed me that a great disaster had overtaken Uncle Peter. Pithole had been burned to ashes, gymnasium and all, and nothing was left of the magic city. Uncle Peter had induced her to invest her entire fortune in the purchase of some great iron tanks full of oil, which was then very cheap compared to the once record price

of $20 per barrel. The idea was that the price would go up again and that the one dollar invested would bring fifteen or sixteen others with it. It was a fine idea; but ideas, like prayers, are not good things to rely upon in times of storms and floods and flames. Prices did really go up from the low point, but the lightning, flashing like the Kaiser's guns, leaped out of the clouds one fearful night and flung Uncle Peter's iron tanks and Aunt Clementine's fortune into the flaming limbo of things which were and in the twinkling of an eye are not. So Uncle Peter and Aunt Clementine, in this unexpected way became tenants at will upon the feudal estate of the Fox family, to whom they paid rent fealty and obeisance, as if they were subjects rather than equals.

I did not know what this disaster, and this change from financial independence to feudal favoritism really meant until the next annual date for the visit to Foxburg came around in the chronology of time. The date arrived in due regularity, but the postman did not stop at our door with the fat letter from my Aunt Clementine enclosing the appreciated draft to meet traveling outlays. Instead there was a mournful epistle telling of the difficulties and tribulations she and good Uncle Peter were forced to endure by reason of their poverty. Hope, however was with them if nothing else remained. Great fortunes were being made in the oil business, and little by little the progress and the advance of the operations were toward Foxburg. Uncle Peter having considerable knowledge of geology, was sure that the rock containing oil would eventually be found along the river, especially on the hill above Parker Ferry Landing. Old Mr. Parker, the father of the boys, had promised a hundred acres or so of land for testing purposes, and the gymnasium man, Mr. Hogan, now at Oil City, was quite disposed to lend funds for the venture; but Mr. Hogan was a sadly prosecuted person, being harassed by lawyers, officials and other meddling people. The strange thing about this new ambition and this kindness of Mr. Hogan was that he had recently been presented with a diamond cross which he wore in his cravat. It came from Washington it seems, and Uncle Peter declares it is an exact reproduction of the one which was wrenched from my neck the day I was so favored by providence as to meet your devoted uncle.

This cross was eventually presented to my aunt immediately after the conversion of Mr. Hogan.

How I pitied Aunt Clementine as I read this letter. I was old enough and worldly-wise enough to know what Hogan's real business was. Some strange intuition told me that the diamond cross would eventually turn out to be the long lost one of my aunt and that somehow and in some way it would return to her bringing with it the fortune which had been lost.

For years the correspondence to and from Foxburg ceased and I naturally concluded that death, the 'one event which happeneth to all' had overtaken my uncle and my aunt. In this I was wrong for one day I found a letter in my candle. It was from my Aunt Clementine. This letter was bursting with good news and contained a royal check upon the Foxburg bank for me. Off I rushed at once, being filled with an exceeding great joy. I was soon with the twain and was happy to see them again.

A strange story it was they told me. The diamond cross had been returned. A lady visiting at the Manor house upon

the hill had admired it greatly and desiring to possess it had tendered a sum in cash which was more than triple what had been paid for it when Aunt Clementine was a girl in her teens. This money had enabled Uncle Peter to drill a well in a new district far to the south and west. It came in good and Aunt Clementine has been paid with interest all the money lost in the old Pithole speculation. Ah, what a blessed visit it was which the unknown lady made to Foxburg and how fortunate that her eyes had seen the diamond cross.

Uncle Peter gave me all the details. Something wierd and strange had happened to Hogan. He had vanished from the regions suddenly, being flat broke and threatened with imprisonment. To the astonishment of the oil world a report soon began to make the rounds of the hotels, the saloons and the brothels, that the fugitive with his wife, a mysterious person also, had been converted and were now spreading the tidings of salvation throughout the land. Uncle Peter said he felt very much perplexed. The thing was not understandable. If it was true, if Hogan had really taken to prayer and abandoned the lucrative procurer business, it simply meant poverty for him. As usual Uncle Peter indulged in unpleasant philosophies regarding the prayer-reliance habit, much to my regret and greatly to Aunt Clementine's dislike.

Bye and bye a more interesting and agreeable subject came up. There had been an event in the Manor house a few weeks before. A new heir had arrived, and that very night the tenants on the estate, their friends and the strangers within their gates, one and all, would be presented formally and after the old feudal fashion to the heir. Nothing in life was more sure and certain than the regularity of the appearance of a new Master Fox, and nothing was more obligatory than the paying of obeisance and honor to him. For one hundred and fifty years, from the time the original Fox came over the mountains to recover his lost health and laid his preemption upon the thousands of wild acres which constituted the estate, then, as today—not an acre ever having been sold—the presentation of the Lord of the Manor to the tenants at will was always the great event of the decades.

With the rest of the townfolks, all dressed in their best, Aunt Clementine, Uncle Peter and myself climbed up the terraced river hill at the appointed hour in the evening and entered the Manor House of Lord and Lady Fox, being ushered into a great and elegant reception room by a liveried chap, who wore silk stockings and a wig with a plaited coil of hair at the back. I really felt I was in England or some of the Colonies where the First Families read the Dooms Day book for relaxation and the Missal for cheer. There was a large assemblage of all sorts and conditions of people, among whom I distinctly recall two. The first was a large, heavy man, pompous in bearing and autocratic in expression. My Uncle Peter informed me that this individual was the banker in the neighboring oil town, that he was an adept in handling funds, and that when he grasped the golden American eagle by the tail, the poor bird had never a chance in the world. He's an accommodating chap, just the same, continued Uncle Peter, 'he is always ready to succor the poor and needy, being a trustee of other folks cash, you know. All you have to do to insure accommodation in his bank is to drop your eye inside the burglar proof vault and handcuff yourself to the judgment note pillory. He will attend to the

rest.' The other man was a genial looking chap, languid in his gait and appearance, but possessed of good manners and a witty tongue. He and the banker were continually sparring at each other. My Aunt Clementine informed me that this latter individual hailed from the buckwheat belt and had the reputation of being very good to his mother, for which all the women commended him highly. While my dear aunt was conveying this interesting information to me, the great rear doors of the reception room, in which we were all crowded, were suddenly flung open and a nurse stood between them holding aloft on a pillow a recently born baby. Behind the nurse appeared a man and a woman—the father and the mother of the child respectively. The father approached the nurse, took the pillow and the child from her arms and lifting the cushioned mannikin high in the air delivered the strangest command ever heard by a true American, his words being as follows: 'Tenants behold your future master. Look upon your subjects Master Fox.' Positively I almost collapsed, never dreaming that such a ceremony would be tolerated in a free country where all are supposed to be equal. I heard the backbones of the tenants creak and snap as they bowed low before young Lord Fox, who yelled lustily as if suspicious of such adulations.

Uncle Peter was likewise overcome and he slipped away from Aunt Clementine and I. 'He usually goes over to see Professor Hogan after these events' said my aunt as we discussed his vanishment on our way back to her home. 'I do not really know what to think about Mr. Hogan, who is to speak tomorrow evening,' she added. 'Some people say he is a bad man, a very bad man, while others contend he is a real samaritan, a healer of the sick and a vitalizer of the aged. He cured a girl whom I know had an affliction of the spine, he absolutely cured her by merely passing his hand up and down her back. But I am afraid he is a wicked man, a very wicked man. I bought a book some time ago which contains an account of him in connection with Pithole. This book is very interesting. I will let you see it when we get home and perhaps you can tell me whether or not I should believe your Uncle Peter when he declares that Mr. Hogan has changed; that he is no longer a sinful man.'

When we arrived home, Aunt Clementine handed me the book she had spoken of. Two turned down leaves indicating the pages referring to Mr. Hogan, and I read them eagerly. The first allusion was as follows:

"Ben Hogan was one of the motley crowd that swarmed to Pithole 'broke.' He taught sparring and gave exhibitions at Diefenbachs variety hall. He fought Jack Holliday for a purse of six hundred dollars and defeated him in six rounds. Four hundred tough men and tougher women were present, many of them armed. Hogan was assured before the fight that he would be killed if he whipped his opponent. He was shot at by Marsh Elliott during the mill but escaped unharmed. Ben met Elliott soon thereafter and knocked him out in four brief rounds, breaking his nose and using him up generally. Next he opened a palatial sporting house, the receipts of which often reached a thousand dollars a day. An adventure of importance was with 'Stonehouse Jack.' This desperado and his gang had a grudge against Hogan and concocted a scheme to kill him. Jack was to arrange a fight with Ben, during which Hogan was to be killed by the crowd. Ben saw his enemy coming out

of a dance hall and blazed away at him but without effect. The fusilade scared 'Stonehouse' away from Pithole and on January 22, 1866 a vigilant committee at Titusville drove the villian out of the oil regions, threatening to hang him or any of his gang who dared to return. The committee was organized to clear out a nest of incendiaries and thugs. The vigilants erected a gallows near the smoking embers of E. B. Chase & Co. general store, fired the preceeding night, and decreed the banishments of hords of toughs. 'Stonehouse Jack' and one hundred other men with a number of vile women came under this sentence. The whole party was formed in line in front of the gallows, the 'Rogue's March' was played and the procession,followed by a great crowd of people, proceeded to the Oil Creek railroad station. The prisoners were ordered on board a special train, with a warning that if they ever again set foot upon the soil of Titusville they would be summarily executed. This salutary action ended organized crime in the oil regions."

I will confess that the reading of this paragraph somewhat dazed me. I remarked, however, to my aunt that Mr. Hogan while circulating in evil company could not have been the worst man in the country for, had he been so, the vigilantes would have undoubtedly sent him away with 'Stonehouse Jack' and the other notabilities. What displeased me most was the author's use of the word 'vile' in connection with women. I felt a sort of a regret that this writer was not saturated, so to speak, with that mild and sweeter philosophy which maintains that women, no matter what their accidental condition may be, are always better and cleaner and nobler than men. Selected to be mothers and home makers by the Great Architect they never of their own instinct, their own nature prove false to their sphere. They may be knocked down but, I maintain, they never fall. 'Vile' is not the word; 'Unfortunate' is the better descriptive term to use when reflecting upon them.

The second and longer paragraph was expressed in this manner:

"Perched on a hill in the hemlock woods, Babylon was the rendezvous of sports, strumpets and pug uglies, who stole, gambled, caroused and did their best to break all commandments at once. Could the place have spoken, what tales of horror the boarding houses under the evergreen trees might recount. In them helpless wretches had been driven to desperation and fitted for the infernal regions. Lust and liquor, goading men to frenzy and madness, resulted often in homicide and suicide.

In an affray one night four were shot. Ben Hogan who laughed at the feeble efforts of the township constables to suppress his resort, was arrested, tried for murder and acquitted on the plea of self defense. The shot that killed the first victim, was supposed to have been fired by 'French Kate,' Hogan's mistress She led the demi-monde in Washington and susceptible congressmen had been fascinated and ruined by her. Ben met her in Pithole where he landed in 1865 and where he ran a variety show that would make the vilest on the Bowery blush to the roots of its hair. He had been a prize fighter on land, a pirate on the sea, a bounty-jumper and a blockade runner. He prided himself on his title of 'The Wickedest Man in the World.' Sentenced to death for his crimes against the government, President Lincoln pardoned him, and he joined the myriad of reckless spirits that sought fresh adventures in the Pennsylvania oil fields. In a few months the scrip-

ture legend 'Babylon has fallen' applied to the malodorous Warren County town. The tiger can change his spots—by moving from one spot to another—and so could Hogan. He was of medium height, square shouldered, stout limbed, exceedingly muscular and trained to use his fists. He fought Tom Allen at Omaha for the championship of the world, sported at Saratoga and in 1872 ran the 'Floating Palace,' a boat ladened with harlots and whiskey, at Parker. The weather growing too cold and the law too hot for comfort, he opened a den and built an opera house at Petrolia. In 'Hogan's Castle' many a clever young oil man learned the short cut to disgrace and perdition. Now and then a frail girl met a sad fate, but the carnival of debautchery went on without interruption. Hogan put on airs, dressed in the loudest style and would have been the Burgess or Mayor of Petrolia by elective choice of the citizens had not the election board deliberately counted him out to save the reputation of the city of ten thousand inhabitants. Hogan then went east to engage in the sawdust swindle, returned to the oil regions in 1875, built an opera house at Elk City, decamped from Bullion, rooted at Tarport and Bradford and departed by night for New York. Surfeited with revelry and about to start to Paris to open a joint, he heard music issuing from a hall on Broadway, and entering the place sat down to wait for the show to begin. Charles Sawyer, the 'Converted Soak' appeared shortly, read a chapter from the bible and told of his rescue from the gutter. Ben was deeply impressed, signed the pledge at the close of the service, agonized in his room until morning on his knees, imploring forgiveness. How surprised the angels must have been at the spectacle of the prodigal in this attitude. After a fierce mental struggle, to quote his own words 'peace filled my soul chock full and I felt awfully happy.' He claimed to be converted and set to work earnestly to learn the alphabet that he might read the scriptures and be an evangelist. He had married 'French Kate' who also professed religion, but it did not strike in very deep and she soon eloped with a tough. Mr. Moody welcomed Hogan and advised him to travel the country over to offset as far as possible his former deeds. Amid scenes of his grossest offenses his reception varied. High-toned christians, who would not touch a down-trodden wretch with a ten foot pole, turned up their delicate noses and refused to countenance the 'low imposter' as they called him. They forgot that he had sold his jewelry and most of his clothes, that he lived on bread and water and endured manifold privations to become a bearer of the gospel message. Even ministers who proclaimed that the 'Blood of Christ cleanses from all sin' doubted Hogan's conversion and showed him the cold shoulder in the chilliest orthodox fashion. He stuck to his job manfully, however, and for eighteen years has labored zealously in the vineyard. Judging from his long struggle and his apparent triumph, is it too much to believe that a front seat and a golden crown are reserved for the reformed pugilist, felon, robber, assassin of virtue and right bower of Old Nick? Hogan is decidedly unlike the straddlers in politics and piety who wish to go to heaven on velvet cushions and pneumatic tires."

Again I was in perplexity and in confusion. . I told my aunt that there was something really marvelous about the man; that I felt he could not have been entirely diabolical; that any one who to the strains of music responded quickly

was not wholly devoid of redeeming qualities; that the fact that he sold his jewelry and clothes, that he lived upon bread and water vouched for the genuineness of his sacrifice.

'He did something far greater than selling his jewelry' remarked my aunt. Whereupon she left the room and soon returned with a piece of jewelry in her hand. It was the diamond cross which the thief in the long ago had wrenched from her neck as she stood by the wagon containing the engravings which disappeared from our library the famous night of the 'Rape of the Books.' 'When he was converted' she said, 'he sent word to Uncle Peter that the jewelry belonged to me; that French Kate had been presented with it by a thief who had been infatuated with her, and she in turn had presented it to him after a time. He wore this cross in his neck scarf and when Uncle Peter's attention was attracted to it and the circumstances of the attack on me and the disappearance of my own cross was told, Hogan admitted that he was the boy in the wagon, the violator of the books and this was the identical cross I wore at the time of the attack, the thief who gave it to French Kate having told her so, and she in turn informed him likewise. He knew this for years and more than once was on the point of returning it to me. He was pleased to do so now.' The next evening Uncle Peter, Aunt Clementine and myself went to the little room in which Hogan was to speak. It was barely half filled but a crowd was without. The attitude of those present was neither friendly nor polite. Evidently Hogan was still the dive keeper to them, the Master of the Floating Palace which not many years previous and but a mile or so distant had defiled the blue waters of the river which flowed past their doors. He must have felt this for his talk was defensive rather than appealing. I remember his appearance very well and was much impressed by it. The face was square rather than oval; the forehead full; the hair black, with a tendency to baldness on the side where it was parted. The ears were large and the nose prominent. The eyes, underneath shaggy brows, were very bright and penetrating with a twinkle in them. His upper lip was hidden by a heavy black mustache which fell around the sides of a strong chin, a regular fighting chin. The neck was thick; the shoulders very large, square and power-suggesting; the hands were heavy and big and when the fist was clenched it reminded me of a sledge hammer. The torso or body was that of a much taller man, for when Hogan sat in his chair he seemed to be almost as massive as when he was on his feet. The legs and feet were admirable. All in all the outline which filled my eye, was that of a perfect athlete. An inch or more to his stature would have made him gigantic, so muscled and so sinewed did he seem. He was very poorly dressed, not negligently but rather as if pinched for ready means.

As he rose to speak, after a short prayer by some one of the Fox tenants who introduced him, he assumed an attitude of attack as if in the prize ring. The thought flashed through my mind that he felt, even if he was unable to express the thought, that the audience regarded his as a moral Michiavelli—an apostle of unscrupulousness, a pretender and a sham. If such was the case he made short work of the impression, knocking it through the ropes in the twinkling of an eye:

'Fellers, ladies and fellow christians' he began in a deep, somewhat melodious voice, with a slight German accent, 'You

all have heard of Ben Hogan. You perhaps heard of me when I was at Parker and Petrolia across the river yonder. I was doing the devil's work then and I did it so well that he, the devil, told me one night in a drunken dream that I should call myself 'the wickedest man in the world' because I deserved the title. I know the devil as no one in the world did, either before or since the day Drake drilled in the little gusher on Oil Creek in '59. Let me tell you that he is a cheap sport, is the devil. He pretends to be the true friend of you pills, you onion and garlic eaters, you drunks, you crooks, you cowards and you gamblers who are laughing at Ben Hogan out on the street. He knows you just as I knows you, but I know the devil better far than any one or all of you do. I found him to be a hard case. He has knocked me out of time, money and character. He always downed me when I worked for him, because he could not play square with me, and let me warn you that he will not play square with you however much you may place your confidence in him and in his ability to give you all the kingdoms and the wealth of the world if you will but continue to serve him openly and to worship him secretly in the closed chambers of your hearts. He is a joker and a fakir. I will not work for him any longer. He is a liar and a thief and you can bet your last filthy dollar that I can prove it. You are oil country people and I know you all from A to Izzard. I did more to make you oil people famous than any other sport that ever lived. You are a mean lot not because you are naturally mean and low down—you people who are out on the corners just now but because you are in a pure and simple gambling business, a crooked business let me tell you, a business in which you cheat and lie and cut each others throats to make a filthy dollar or so. The day I hit Pithole in '65 in company with Burke the thief, who stole the diamond cross belonging to one of the christian ladies now in this room—which cross I myself returned to her without a price and without a reward—that very day in '65 I knew what you were and what you wanted and I, Ben Hogan, the Sailor Boy, the Wickedest Man in the World, I made it my business to supply what you wanted to-wit, wine, women and song, all for the dollar you love, live and die for. Oh, yes; I was wicked, I robbed, I killed, I cheated and I lied, because you paid me to do so in a manner you liked. You made me a sporting man, I did not make you sport lovers. The love was in your hearts before Ben Hogan came to Pithole, to Babylon, to Tidioute, to Parker, to Petrolia; before Bullion came, before Tarport rose and before Bradford fell. It is there now and there it will be until God in his loving kindness drives it out to fall upon the rocks of this barren wilderness and perish. You are your own meanest enemies because you wish, all of you, to lead the sporting life. The life of a sporting man or woman, let me tell you, is the meanest of all lives. I am the authority on the subject, and you know it. Is there any one here who cares to challenge Ben Hogan on the subject? Haven't I been in the line long enough to know all about it? Let no one here question the right of Ben Hogan to pass judgment on this all important subject. I have been the Master of your sporting houses and you paid me for running them. I have seen your wealth melt like the snow and sink into the vortex of your passions where it was lost forever, both to you and to me, because it was filth and not true gold. There is no

salvation in filth but there is in faith. 'Can crooked people like you say we are,' be made straight, you ask Ben Hogan, the meek and lowly desperado now talking to you, and he answers yes, the crookedest of you all can be made straight, even as he himself has been made straight and will continue to be straight. How? you further ask. Well, no matter how crooked a man is God can straighten him out. God is always willing to play square with men and women. If you want to gamble, call at the Temple by the road and gamble yourselves into the Kingdom of God. If you wish to drink, quaff freely of the waters of perpetual life. If you want a friend call for God and he will respond. He will take hold of you, and you can bet your life when God gets hold of a man the laziness will be knocked out of that man in a jiffy. You don't believe it, eh? You say to yourself Hogan is playing some new game on us talking about free salvation. Who ever heard of anything in the oil regions, any good thing, being free? I have. Salvation is free even for you miserable skinners outside, who should be charged double rates for admission to heaven. Ben Hogan's fists are also free. I hear you say to each other that Hogan is in the business to make money. Ha, ha! Why, if I wanted to make or needed money I would take up my old business again and supply every man of you with a separate harem, equipped with fans and baths and filled with wines and jubilant songs. You would rush to them and I, once more, would be rich. If any of you ever open your mouth again to indulge in such melodious lies, I'll knock that music of yours clean out of existence. I can be as calm and gentle as a lamb if the wind is tempered right; likewise I can be as bold as a lion when some of you reach backwards for your cowardly shooting irons. You say we mean you no harm, Ben Hogan, but we don't understand you. We think you have stacked the cards on us and want our hard earned coin. Don't understand me, hey! Well, it's God's will that I make you understand me, and that's why I am here in Foxburg tonight. You can't understand my conversion. You doubt its genuineness. Some of you say, I am told, that perhaps it was caused by reading the bible. Ben Hogan replies that he never had a bible to read before the hour God spoke to him. Never had he even seen or heard of a bible, which is nothing strange as most of his life was spent among you oil people, and bibles are mighty scarce among you. Morever if a bible were given to him by mistake or intention, it would have been a gift of vanity because Ben Hogan could neither read nor write up to the moment when God, the good God, took pity upon him and his ignorance and said: Son I am well pleased with you. You know not letters nor books nor can you trace the sayings of the wise upon paper with pen or pencil. I am your instructor and I will give you wisdom and science which are mine only and come from me alone. Henceforth like handmaidens they will attend you and like slaves will they serve you. They will make you a poet and a prose writer; fancies will spring from your dreams and from your midnight cogitations will ideal beings rise; an orator you shall be with pharse of gold and melodious utterances; a humorist also to make laughter at the festival and gayety at the marriage feast. A physician likewise shall you become for the world is a garden to be sweetened with the perfume of health and though it is filled with graves, upon each of them should the flowers of remembrance

bloom and the blossoms of love perish not."

The effect of this frenzied outburst upon the audience and upon the speaker also was very marked. I whispered to my aunt that Hogan was mad with the ardor of his new religious zeal, and that he filled me with something akin to fear. 'He is wakening you up' she whispered. Wiping his brow with his handkerchief the evangelist continued to discourse in the original scolding vein, saying, according to my shorthand notes, which are now and then quite unreadable, something like this:

"Yes, you oil country people are a mean lot. You refuse to believe that Ben Hogan's conversion was due to the direct interposition of the Almighty and to the Grace of God, even when Hogan himself, the only witness, testifies solemnly to the fact. You say Hogan was influenced by religious instruction when the fact is he never had any instruction whatever. He stepped out of the dive at Tarport one night and the next day was knocking at the door of Paradise. His experience was something like that of the man from Chicago who met Saint Peter at that same gate and at once began to brag about Chicago with its 218 churches. 'You say you are from Chicago,' said Saint Peter perplexedly, 'Chicago-Chicago, where is Chicago?' Producing a map the stranger pointed out the location of the swift place of hogs and hoggers, and with pride dilated upon its great grain and provision markets, its huge elevators, its great mercantile buildings, its spreading acreages of cattle pens, its parks with pleasant walks and statuaries, its drives and boulevards with princely homes and royal cottages on either side. He, the stranger, was surprised that Saint Peter had never heard of the great city. 'No surprise about it' remarked the Saint as he admitted the wayfarer, 'you are the first man who ever came up here from Chicago.' As much surprised no doubt will the guardian at the Gate be when Ben Hogan appears before him and announces that he is from the oil country famous for the people who live and luxuriate in it. You people, with your prayers and practices remind me of the Scotchman who being penitent went behind a fence to pray, declaring that if the fence would fall upon him instantly it would be no more than he deserved. At that moment a high and sudden wind blew the fence over upon him. Arising hastily, and in fright, from his knees, he cried out: 'Hey doo, Laird of the Holy Sabbath. It's a awfu' wairld this! A body canna say a thing in a joke but it's taken in earnest.' Yes, that's the oil country style. When put to the test, when the fence of affliction falls upon you in response to prayers or practices you claim you were only joking. You even claim that Hogan is joking, but he himself tells you that he is in earnest. If there is a God, henceforth and until the end, he will be with him. If there is a heaven and a hell, Hogan will be on the right and not on the wrong side. It is upon the right side that I wish to talk to you tonight, the side of temperance, the side of kindness and the side of morality—morality, a thing which some people say is non-existent and non-observable. The oil regions is not a place which is now, or ever has been big and pregnant with righteousness, I, Ben Hogan say so, and you who are here and who are without know that Hogan knows this to be a fact. Therefore I am going to talk to you upon a subject nearest your heart, that is to say 'Wine and Women.'

"The moderate drinker is the decoy

duck of the devil and the saloon keeper is the devil's ammunition supplier. They are banded together and are both generally bad characters. Avoid them, spit upon them. However, do not place all liquor dealers in the category of bad men. I have known many of them to be good and generous; yes, to be opposed to intemperance and who did all in their power to mitigate the evil of debaucheries. They were simply good and honest men who got into the wrong groove and could not get out of it because they had to live and because society required certain things. You will say: Oh, that is all very well but what remedy do you propose; how are you going to help us out of the mire in which we find ourselves? My answer is that if society is at present so constituted that liquor saloons cannot be done away with, then the only remedy I propose is that which can be found in the 55th chapter of Isaiah, 6th, 7th and 8th verses, reading thus:

"Seek the Lord where he may be found, call upon him while he is near.

"Let the wicked forsake his way and the unrighteous man his thoughts, and let him return to the Lord and he will have mercy upon him, and to our God and he will abundantly pardon.

"For my thoughts are not your thoughts, nor your ways my ways, saith the Lord."

"Yes, that is my answer: Seek, call, forsake, return. You say we can't, we can't. It is a lie. You can, you can. Ben Hogan quit drink, gave it up forever, and so can you if you will but try. The doctor can, with a drug, make you sick, so nauseated, that your stomach will revolt even at the sight of drink. Cannot health and strength do what sickness does? Yes, yes! There are springs of water which will nauseate you the same way and you will hate drink. There is a book the reading of which is like drinking the waters of such springs. What book is that? you ask. It is this book, the bible, the very book which Saint John took out of the angel's hand and ate it and it was in his mouth sweet as honey, but as soon as he had eaten it his belly became bitter. That is it, that turning of the belly, that nausia and dislike for what was once sweet as honey. Oh, yes, stop drinking and you will be sober; try and you will succeed.

"Then as to women, as to the social evil, what of that? Am I not the authority on this subject? Surely no one would question my right to pass judgment upon this important factor in life. It would be an excellent thing, no doubt if murder and theft and crime could be done away with altogether. No laws, however, can be enacted to encompass this desirable result. So then in dealing with this perplexing question, we must look facts squarely in the face and be governed and guided by them. It is a fact to begin with that women have prostituted themselves in all stages of the world's history. It is a fact that from the very nature of society this evil will continue so long as the passions of men overmaster and control their reason. It is a fact that in every city and town of any size in the United States there are a greater or smaller number of houses devoted to prostitution and to the practices of illicit intercourse. It is a fact that man is addicted to folly and woman is weak. Therefore, until society is reconstructed upon a different base than its present foundation, things will remain just as they are at this moment. How then shall this evil be met, you ask? Ben Hogan says the social evil cannot be exterminated. The only thing left to do is to render it as harmless as

possible by surrounding it with legal safeguards as may be found practical. In spite of the police, the preachers and the philosophers, places of prostitution will be found in every port and parish of extent. The sensible, the worldly plan should be to make them as productive of as little evil as possible. What we cannot avoid we must endure. While it is true that no means have ever yet been devised to prevent a wilful man and wanton woman from sinning, yet it is true they can be restricted and restrained. Therefore, says Ben Hogan choose the lesser evil. Prostitution is a leprosy, a leprosy of the body only which death can terminate. There is a worse leprosy, however, and that is the leprosy of infamy, the infamy of crime. It is a crime to neglect and disregard evil things and society is criminal in shutting its eyes to prostitution, in passing it by with drawn skirts. Let it regulate it, control it. Let it remove the cause and the abortive thing will perish. What we need are good and faithful citizens and these are not to be fostered in a gambling or liquor saloon nor will they flourish in a house of prostitution. The gambling table is a horror, but as a general thing it beggars its victims so swiftly as to paralyze him for some time at least and prevent him from indulging in its excesses, merely because of want of means. In the liquor saloon for a trifle one can so lay the foundations of destruction as to bring his case beyond hope. I have not sought to extenuate anything or to whitewash offenses with soft words. My message is: Avoid the wine cup and the gambling table and the other fascinations of the arch enemy of souls; but, as to women protect them ever and always. If they have gone astray, bring them back. Of the women whom I knew, who had gone astray, I declare it to be the fact that in nine cases out of ten the fault was not with the girl but with the world. Society makes prostitution inevitable by its manner of dealing with the erring. Take the common example of a girl who has fallen. Her offense may have been the result of thoughtlessness or of temptation or passion perhaps, or of sheer want. Yet by this one misstep the girl has not become a criminal. Reclamation may be possible. But what is the treatment she receives? Her friends cast her off—her home is shut against her. What alternative then is left her but to follow the path she has entered upon, and become with wine and gambling, one of the curses of the world. I maintain it is a common error to assume that when a woman once loses her virtue she thereby forfeits all claims to respect. This is false doctrine. This is the curse of society. Pick the woman up, speak kindly to her. Tell her hope is not dead; that she has an advocate with the father which is in heaven and a friend in you and, mark my words what was crooked will be straightened up."

Abruptly, with no preliminary indications thereof, the address was thus brought to a close. Hogan sat down and stared at the audience as it filed out of the door. I was much impressed with the coldness of the leaving. Only the three of us, Uncle Peter, Aunt Clementine and myself greeted the speaker and grasped his hand. 'Great address you gave us Hogan,' said my Uncle Peter. 'Never did man speak like you on such a subject."

Of course there was much discussion between Uncle Peter, my aunt and myself concerning Hogan, following his appearance at Foxburg as a christian teacher and exemplar. The change,

which had undoubtedly been wrought in him, astonished and perplexed every one who had knowledge of his former life, its baseness, and the audacity of its conduct. All these various phases developed in the course of our discussions, but the man himself and the Foxburg meeting invariably became the final theme of our talk. My aunt regretted that Hogan had not dwelt, in this particular instance, upon the manner and the circumstances of his sudden conversion. She maintained with much positiveness that this event was due to some direct interposition of the higher powers and, further, averred that the very suddenness of the same was proof of its genuineness. It was, she said, like the conversion of St. Paul, whose life had been uncommendable previous to the visitation of the shaft of light which had prostrated him. Paul had been a physically strong man, a fighter of beasts in the arenas, and a killer even as Hogan had been in his evil days. But when the shaft, with inconceivable swiftness, struck him between the eyes he became instantly another and a saintly man. The past was erased from his record and he was redeemed, purged, cleaned and saved. So it was with Hogan, perhaps. The awakening was not through the work of man but through that of a greater power.

Uncle Peter, as was expected, registered his dissent to all this. He maintained that, if the conversion was traced to its true cause, it would be found to have some human determining element in it. When Hogan had disappeared from the oil country, being in the full enjoyment and flower of his reputation as the Wickedest Man in the World,' a great economic cause was pressing upon the regions. The 'shut-down' of all operations in the petroleum industry was in effect. There was neither work nor wages, returns nor gatherings of any sort throughout the land. The sinners were without funds to indulge in orgies, and the moralists likewise. This circumstance, Uncle Peter declared, closed the harems and it may have been that the conversion, if not the direct result of this shut-down or total cessation of a great industry, at least prepared the way for it, making it smooth, easy and regular. 'Sancity rarely springs from feasts and Babylonian indulgences,' said Uncle Peter. He felt sorry for the wicked Ben he declared. The man's career had been vicious enough in all respects, he allowed, and it was to be regretted that the old desperado should subject himself to suspicion in his final course of life; that he should burden his broad shoulders with the possibility of a relapse, a return to the flesh pots and the white slave traffic. Renegades are not liked, he declared. 'Ben should have stuck to his gymnasiums. He was truly superb as an instructor in bodily exercises, few equalling him and none surpassing him in that line. His followers were all amazed and woe-stricken. Many of them had taken out life memberships in the exercise parlors, and to be thrown down in this manner, to have the master pop up as a preacher of morality and a leader in prayer, was a strain, to say the least, on the extension of confidence as between man and man and neighbor and neighbor.'

As for myself, I confessed that I liked the philosophy which ran through Hogan's utterances. There was a ring of genuineness in the deep voice of the man as he developed his theory towards the 'wine and women' problem. It was

fine, really and truly fine, I declared, for the fearless desperado of the regions to extend the helping hand, to appeal for a better attitude and a clearer understanding of women; to maintain that they always deserved the best and kindest consideration that man could extend to them—no matter how they had erred or how far they had gone astray from their purpose and mission in life. If they had left the 'fair hill to feed and fatten on the moor' it was a mistake to be sure, but the mistake was rectifiable. Women are our mothers, our sisters, our sweethearts and our wives. Their rank is above us. On election day only are they beneath us trousered Kaisers, strong-armed and imperious. If they err, let us not vilify but rather strive to save. Then, being somewhat wrought up, I remembered what I had read in Lecky's History of European Civilization concerning the Forlorn One, the woman who had dropped into the mire, and, to the surprise of all, myself included. I repeated the words of that classic and immortal deliverance, which was, and is and ever will be one of the gems of utterance upon the subject, the same being as follows:

"There has arisen in society a figure which is certainly the most mornful and, in some respects, the most awful upon which the eye of the moralist can dwell —that of the unhappy being whose very name it is a shame to speak; who counterfeits with a cold heart the transports of affection and submits herself to passion as the willing instrument of lust; who is scorned and insulted as the vilest of her sex and is doomed for the most part to disease, abject wretchedness and an early death. Herself the supreme type of vice, she is ultimately the most efficient guardian of virtue. But for her the unchallenged purity of countless homes would be polluted. On that one degraded and ignoble form are concentrated all the passions that might have filled the world with shame. She remains, while creeds and civilizations rise and fall, the Eternal Priestess of Humanity blasted for the sins of a people."

"Very fine, my boy" cried Uncle Peter when I had finished. "That thought of Lecky's will help in the exculpation of Hogan, even if it will not justify him in good repute. She who counterfeits the transports of affection, who willingly submits herself to passion as the instrument of lust is indeed a mournful figure and yet she is a woman with all a woman's attributes, attractions and powers. For her virtues we admire her but, sometimes, sometimes, I think, that for her weaknesses we love her."

"I wish" I replied to him, "that Mr. Lecky had not used the word 'vile'. It is a misapplication, it seems to me, to associate the adjective with the sex. It spoils the classic."

"Just so" he admitted. "But to return to Hogan and his career. Consider the situation, the environment in which Ben found himself when he arrived in the oil regions in the old Pithole days. The Civil war had just been successfully closed by the Union triumph. For five long years force had ruled. For five long years the soldiers had enjoyed the might established right of looting, ravishing, burning and killing. This armed host was suddenly disbanded and discharged. A national debauch ensued in which money was spent with mad recklessness. When sobriety came around the money was gone. Tales were told of great and sudden fortunes being reaped over-night in the oil regions—the new Eldorado. A rush thither followed of the money-mad crowd. It was a

homeless and a womanless country they came to—a land of tents and camps, of board and plaster cities which rose and fell in a day almost. Such was the environment into which Hogan and his pals found themselves of a sudden. What was to be expected of them and their like under the circumstances? In establishing his gymnasiums first and then, little by little developing these concerns into harems and seminaries it may be that the Wicked One was merely bowing to social necessities and conditions. As he himself said, 'had there been no sinners in the Regions there would have been no sin.' It is quite possible that, as Lecky's intimates, the women he utilized to counterfeit the transports of affection may have really been 'the guardians of virtue' and the protectresses of the unchallenged purity of countless homes otherwise doomed to pollution. Life, surely is a strange thing after all."

Sure, it is the strangest thing within the circle of existence.

Soon thereafter one of 'life strange things' developed—for our special benefit it seemed. The matrons, homemakers and housekeepers of an adjoining community—not an oil town by the way—having learned through the public print that Mr. and Mrs. Ben Hogan had been socially lionized by the elite of New York City, after the conversion of the sinner, decided to imitate the function and sent out cards of invitation for a reception to the Evangelist and his wife. The three of us were favored with a special call and we accepted very promptly.

While on our way to this town, which was some distance from Foxburg, Uncle Peter and I went into the smoking car to enjoy a cigar. Again we found ourselves in the Hogan atmosphere. Two men occupied the seat before us and they were discussing with some divergence of views the apearance of Hogan as a moralist. One of these men, a sharp featured, rather soft-voiced man, said of a sudden: "I can't understand the thing. No man who has made such a base use of women as Ben Hogan did throughout the oil regions, has any right or title to appear before us as a moral teacher. It is shocking, I say. No member of my family shall ever encourage him by their appearance at any of his addresses."

"That may be right and proper" rejoined the other, "but as for me I am going to give the man the benefit of the doubt. I knew him very well. He was, as he himself says and rather boasts of, a bruiser and a bad man and yet there was always something about him which challenged a sort of respect. I recollect passing through Babylon one day when I was very young. A hard character was shooting up the place both with foul words and bullets. Along came Hogan; without a syllable from his lips, and with the spring of a tiger, he flung himself upon the shooter, lifted him above his head and with surprising strength flung him against the side of a house, rendering him unconscious. Hogan then disarmed the fellow and walked away unconcernededly. Whatever may be said against this new evangelist, all of us who knew him in the oil country must admit that he did not indulge in the use of filthy words to overcome his antagonists or enemies. He did not fling the manure pile of insulting terms and phrases into a man's face to subdue him. The Hogan sort of a chap is always better than the foulmouthed bully, it seems to me. Really

I believe Hogan taught the Regions good manners and decency of speech by subduing the local mouth fighters one by one."

"Rot" replied the first man. "Hogan was a mere gambler and a dive keeper."

"Well, admitting all that, he had many of the elements of a gentleman about him just the same" replied the second.

"That chap who is sneering at Hogan" said my Uncle Peter, "is a typical puritan. The second man is the saloon keeper over at Petrolia."

When we arrived at our destination, we found ourselves in the midst of a religious gathering, so to speak. Clergymen and their wives were in the majority. "Glad of it" said Uncle Peter. "We are sure to get something good to eat. Chicken and clergymen are in ancient alliance. It is a natural connection so to speak. Hogan always had a weakness for the clergy and things clerical. Didn't he begin his career by robbing the Rev. Dr. Bookman of his religious engravings? Didn't he imitate the clergyman at Babylon, performing marriages in his dive as set forth in 'Sketches in Crude Oil'? Didn't he cling to your aunt's diamond cross for many evil years; and, now, is he not in the calling itself?"

"I do wish" I said, "that I could learn something really authentic about the man. He interests me intensely."

Just then a small boy approached us holding up two books, cried out: "Life and Adventures of Ben Hogan. Confession of Ben Hogan. One dollar each."

I bought a copy of each of these books, for future reference and use. The value of this accidental purchase will be seen hereafter.

To be Continued in the October Number

OIL COUNTRY MEN STRAIGHT-OUT AMERICANS
Theodore Roosevelt Acknowledges the Receipt of the Oil Region Story
"646 AND THE TROUBLE MAN"

Metropolitan

THE LIVEST MAGAZINE IN AMERICA
432 FOURTH AVENUE, NEW YORK

Office of
Theodore Roosevelt

January 30th, 1917.

My dear Mr. Oliver:

That's mighty nice of you. The book has come. I shall read it at once, and I know I shall like it. The oil country boys are straight-out Americans of the not-too-proud-to-fight variety, and I believe in them.

Sincerely yours,

T. Roosevelt

Mr. C. H. Oliver,
Oil & Gas Man's Magazine.
Butler, Pa.

RANDOM RECOLLECTIONS.

BY C. R. WATSON.

WHAT was my great surprise and emotion coupled with ecstatic pleasure on a rare day in June to receive a most delightful letter from my old friend, of many years ago, James R. Cunningham ("Stop-Cock-Jim") writing me from his winter home in Norfolk, Virginia, stating that he was alive and alert and on that day (June 5th) envying the youngsters who were registering for service under Uncle Sam's banner.

It will be remembered by the readers of this periodical that in the first chapter of "Random Recollections" appearing in the last issue, that through information supposed to be reliable, I had taken "Stop-Cock-Jim," from Time's narrow sands and placed him on the broad bosom of that sea which hath no shore. What an agreeable sensation I experienced in receiving the letter can only be imagined, and the old-time pipe liners who are still left among us will also be glad to read this correction.

"Stop-Cock-Jim" reports himself in the best of health and while having retired from active work, yet takes an interest in public affairs in Norfolk, along political lines, and is now, and has been, for six years a member of the Board of Alderman.

He was much interested in the story of "Ben Hogan" that had at that time already been announced to appear in this issue as he knew Ben at Parker, Petrolia, Pittsburgh and other points. Stating that the last time he had seen the self-proclaimed "Wickedest Man in the World" was when he was returning from Alaska in 1883 and stopped off at Portland Oregon, where Hogan was holding evangelistic meetings. He attended a meeting and listened with rapt attention to Ben's story of his remarkable career—more strange than fiction—and part of which was familiar to this one auditor. At the conclusion of the meeting Jim went upon the platform and shook hands with the speaker who expressed great surprise and pleasure to see an old oil country boy. Jim was introduced to the several preachers who occupied the platform with the remark "that here was a man, who in part at least, could verify what he had uttered during his discourse of the evening." "Yes" Jim said "I can cheerfully say that as a wicked member of the genus homo, Mr. Hogan was a howling success, and the words spoken by him tonight were as true as Holy Writ. There was one thing, however," Jim said, "that Ben as a sportsman was a total failure, and that was the practical side of the great American game of poker." "That is true" Ben laughingly replied, as I found trying to make you wreck your cards by bluffing was a rather expensive business."

The summer of 1879 was a season of many electrical storms and heavy rains in Butler County, Pennsylvania. The latter part of July, of that year, a downpour of rain lasting for over an hour, caused the waters of Bear Creek, which

passed under a part of the town of Petrolia, to overflow its banks, resulting in the destruction of buildings that had been built over and beside the creek. Forty or more houses principally business places, were swept from their foundations and piled up enmasse entailing a loss of $50,000.

I was at this time employed at Kaylor pump station, located mid-way between Chicora and East Brady, as engineer and operator for the United Pipe Lines. The rainfall was possibly greater there than at Petrolia. The station was located on a strip of land lying between the creek and the wagon road which abutted a perpendicular, high hill. Albert Wickes, familiarly known as "Spotted Tail" which we abridged to "Spot," a nickname acquired from the fact of him having fought against that wily chief and his band of redskins in the far west where he had been employed as a cowboy, was one of the gaugers. "Spot" happened to be near the station when the storm broke and rode his little calico pony, that he used in his work, into the boiler-house for protection. It, however, proved an unsafe place as the water followed him in rising rapidly and it was with difficulty that he forced his diminutive horse through the turbulent waters to dry land. (Poor "Spot" he was destined to lose his life, some thirty years later under similar circumstances. He was employed as gauger for the Producers and Refiners Co., in the Butler County field and while trying to ford the swollen Connoquenessing creek, was swept to his death and thus perished as good hearted a man as ever lived.) With the on-rush of water, a Swede employed as pumper for Richard Jennings, was driven into my boiler-house. The water still continued to come down in sheets and in a few minutes we were forced to seek a place of safety on the roof top, where we felt the full fury of the storm, expecting at any moment that the two 1,200 barrel wooden tanks located directly in front of the station with the jetsam and flotsam of the debacle battering against them threatening at any minute to force them from their sites and thus precipitating them against the boiler-house meaning its destruction and our certain death. Wickes having crossed the raging Rubicon safely and realizing our great danger secured a sand line and some assistance and with cleverness acquired in his western life sent the end of the rope whirling to me which from my perilous position, after several efforts, I succeeded in catching and making fast to the smoke stack. Now the point was to cross this young Niagara, filled with debris, by the rope going hand over hand. There was no time to discuss the manner of procedure, so I told the Swede to go first. He bane very much excited and fussed and got on the wrong side of the rope, which came near being his undoing, as the water caught him and swung him under, but he had a death-grip hold on the rope which could not be broken and with words of instruction and encouragement from me he reached terra firma safely. When my time came to cross I grasped the rope and was proceeding rapidly when there loomed up ahead of me an outbuilding and a small tree bearing rapidly down upon me, the men on the bank noticing the danger lifted the rope up high so the debris could pass under, which act caused me to be lifted nearly clear of the water. While this suspension in the air could not have been for more than

half a minute yet it seemed like an eternity, but it was successful, and I reached shore none the worse for the adventure other than a good ducking. From the fact of the water splitting against the tanks, part going down the creek and part through the deep road bed breaking the force of the flood against the tanks undoubtedly saved the boiler-house and incidentally our lives.

While employed at Kaylor "Spot" Wickes and I occupied a shanty located on a hill across from the station on the public road. Nearly a year had elapsed when an avaricious farmer thought he would mulct us for rent. We had a meeting and decided by a unanimous vote that we would not pay and appointed a ways and means committee to devise a way out of the trouble. The following night being Halloween the committee saw its opportunity and decided to follow the trite adage "that it is cheaper to move than to pay rent" so on the aforesaid night when grave yards are supposed to yawn, etc., we removed our most valuable possessions consisting of two old trunks worth about fifty cents each and with the aid of a fence rail, borrowed from the said farmer's fence, placed one end under the building and with a little exertion on the other succeeded in sending our erstwhile domicile flying down the embankment reducing it to kindling wood, and thus the rent was cancelled. To this day that farmer thinks that it was the work of some mischevious boys.

From Kaylor I was sent to Oil City where I remained for two years. Developments had set in very strongly towards Bradford and those two years were exciting ones in oil circles, the Oil Exchanges being the center of attraction. I was then sent to Petrolia as a representative for the United Pipe Lines. Located in the same office was Stephen W. Harley, who bought oil for Henry Lewis & Co., Standard Oil brokers, of Oil City. Steve and I became fast friends which was only broken by his untimely death in 1891. Harley's career was self-made, he having started as a mere boy under adverse circumstances, and by hard work and dilligent application to business made a success of life. Possessing the social qualities and the magnetism that constitutes a leader he was sought after by aspiring candidates for political office and helped many to succeed in their aspirations. One of these recipients of his help and bounty sadly failed to reciprocate at a time when he could have fittingly done so. This however is another story and will be related further on.

Steve was most courteous and affable in his office at all times, which is saying a whole lot for him as the Standard Oil Co. was blamed for every adverse happening under the sun at that time, and he had to stand for many taunting and sarcastic words from his customers, especially when the market was off, but he was equal to all occasions in repartee. He was, however, pursued by a Nemesis, in the shape of a typical termagant that caused him many unpleasant moments. This was a case of a woman who imagined that she was being continuously robbed by the Standard Oil Co. She made it a point to pour out her vials of wrath upon Steve on every occasion that brought her to his office to sell her credit balance. Like many similar cases her troubles were of her own making; lets review this one briefly:

For convenience we will call this virago by the name of Mrs. Gamp. When the oil man following the south-

ern trail swept over into Butler county, Mrs. Gamp was occupying a log hut and living almost like one of the primeval age. The land was most sterile, rocky and forbidden, not even good for buckwheat or "soap mines" for which the county is noted. Possessed of a raucous voice, a face that would stop a clock and an umbilical shape; turbulent and quarrelsome in disposition, that her sudden elevation—by the discovery of mammoth wells on her property—from penury to affluence did not effect. Her chief purpose in life seemed to try and make every one uncomfortable with whom she came in contact. There came a wooer of her wealth not herself, one day, and the nuptials soon followed. Man is of few years and full of trouble and so it was in this case. We trust he sleeps well after life's fitful fever.

With wells gushing out riches from her land and the price hovering around $4 per barrel one would have thought that she would be glad to sell at that price and be happy. But no, like James S. McCray, of up the creek fame, who imagined his oil was worth much more than the liberal offers tendered him and lost $600,000 by tanking and holding his oil; Mrs. Gamp developed the same scheme whereby through building an iron tank and other ways she would circumvent the rapacious octopus and compel them to pay her $5.00 per barrel. But like Bobby Burns' poetical words after turning up a nest of mice while plowing, "The best laid scheme o'mice and men gang aft a-gley" and he might of added that of "woman" also. So Mrs. Gamp had her iron tank filled with high priced oil. In order to avoid the risk of fire, which were numerous from lightning in those days, she had the tank connected with the pipe lines, subject to its regulations, which was deduction for shrinkage and leakage and a general average assessment in case of fire. Not satisfied with the storage of this 20,000 barrels, as soon as a 1,000 barrels was run in the line to her credit it was turned into a thousand barrel certificate or acceptance as they termed them, until she had 20,000 barrels. This oil was subject to storage and general average assessments. In 1876 the market sold for a brief time above the $4 mark. Bullion, however, caused a slump, followed by the development of the great basin of oil at Bradford and the northern pools. Then in succession came Thorn Creek, Washington, McDonald, West Virginia and finally the Ohio, Indiana, Illinois and great Mid-Continent fields causing a low average price for forty years. So Mrs. Gamp, like McCray, through damphoolishness passed away without realizing the goal of $5.00 oil. Many thousands of dollars were wasted without benefit to any one as a great portion of the oil was lost by leakage, evaporation, fires and general deterioration as B. S. in those days did not have the commercial value it has today.

The close of the year 1882 proved a very disastrous one to speculators and also to many brokers who were unable to tide over the panics that occurred. With the bottom dropping out of the Cherry Grove pool wild excitement prevailed in the market; the transactions on the floors of the exchanges being greater, by many million barrels than ever before, and was exceeded only once afterwards (1884). The oil country went wild and every one who could raise a few dollars to margin 1,000 barrels for a few cents was in the maelstrom and in the end was swallowed up by it.

Harley and I were playing the game intermittently and had been quite

successful with our pyking. Under tremendous buying, with narrow margins behind it, the market was laboriously pushed up to $1.37 per barrel. The result was inevitable, a panic ensued and the price in a few days ebbed to $1.00. Here the market was maintained for a few days and the logical conclusion of many that it was time to catch on for a turn, was shared in by myself and Steve, and we backed it by buying heavily for a quick turn, but, alack-a-day, there was no reaction, and the worst panic of all occurred, prices sagging without recovery until 70c was reached. All our accumulated profits and original margins were swept away in the most disastrous financial crisis the oil world had yet witnessed. The small oil towns never fully recovered from the effects of this panic and speculation in oil received almost its finishing stroke.

In 1884 speculation had again recovered its equilibrium and there was another whirl-wind of excitement; the transactions in the exchanges were enormous and of course the unavoidable occurred. The year 1884 will always stand out prominently as the most disastrous one in financial circles when on May 16th the failure of the Marine bank of New York City and the firm of Grant & Ward started a series of failures that brought about a decline in the price of crude certificates of 38 cents in less than ten days. The ruin of the Penn bank at Pittsburgh, the failure of James H. Keene, the New York Metropolitan bank, Fish & Hatch, Hatch & Foote, Dimmick & Co. and many small banks in the oil regions followed in quick succession and the financial world was shaken from center to circumference and speculation was anathematized by its many victims.

In 1885-86 were rather lean years for the average broker and there was a gradual getting away from the exchanges for legitimate business. The producers movement galvanized a little life into speculation in 1887, but the hand writing on the wall was plain to every one. There was only a semblance of life left up to the year 1895 when through a clever coup d'etat oil speculation was laid to rest for ever. Since then the oil country has prospered as never before. Let us hope that we are now entering

PHILLIPS NO. 1
First Big Gusher on Thorn Creek. Struck August 31, 1884.

upon a new era, occasioned by the war, when all speculation, of whatever character, shall have been done away with for all time and the poor lambs be permitted to keep their growth of wool for more legitimate purposes.

On March 18th, 1882, Simcox & Myers struck a well at Baldridge (now Renfrew) seven miles below Butler, Pennsylvania. July 1st of the same

year Andy Shidemantle (still living and as chipper as ever) struck the "Bugaboo" well that started off at 800 barrels. Butler county had been neglected from 1878 to 1882, Bradford and the northern pools occupying the center of the oil stage. But with the completion of these wells followed by the Phillips gusher on August 31st, 1884, ushering in Thorn Creek, the curtain was again rung up and the oil talent flocked to Butler county and Thorn Creek became a household word throughout the oil country.

Under the nom de plume of "Keno" Harley reported the oil news for the Titusville "Herald" and under my own initials I did the same for the Oil City "Derrick". This I continued to do for thirty years. Starting with Thorn Creek, then in succession Glade Run, Saxonburg, Jefferson Center, the great "Hundred Foot" field in Connoquenessing township, Cooperstown, Harmony, Muddy Creek, Callery (town lot), Zelienople, Brownsdale, Speechley and Adams pool. With the Washington developments and the opening of the great McDonald field, Butler county again went into the discard and with an occasional spasm, now and then, has remained quiet ever since.

Learning of the great strike at Thorn Creek, the following Sunday found Harley and I on the ground. My report of the well was in substance that from the fact of the third and fourth sands coming together at that point which had been clearly demonstrated—assured great possibilities for a most prolific pool, of narrow limits, by reason of wells drilled in the past two years on both sides of the belt or pool, denoting its limitations. The magnitude of the Phillips, the Christie, the Fishel and Connors and finally the Armstrong No. 2. were never dreamed of as a fact.

On this particular Sunday there were many prominent oil men on the ground together with hundreds of sight-seers. The question of eats was agitating our minds as the hour of noon approached, as we were ravenously hungry. Harley came to me and whispered confidentially that he knew where we could be entertained and get a good dinner if I cared to brave the hot sun by climbing a long hill; explaining that the owner of the farm which was pouring, figuratively speaking, great wealth into his lap, was a friend of his; that he had given him practical assistance in his candidacy for county commissioner the year previous and he felt assured we would receive a very cordial welcome. Arriving at the pleasant farm house we were received by the farmer himself. He had plenty of alfalfa around the under jaw with a severe cast of features, and after giving him the once over my heart sank to zero. Steve, however was undaunted and talked in his most suave manner of the beauty of having a 3,000 barrel gusher, and explaining to him how he could dispose of his oil without the inconvenience and expense of going to Petrolia. As I sat there taking no part in the conversation it occurred to me that Steve's words were falling on one whose milk of human kindness had dried up long ago, if it had ever existed. The savory of the cooking dinner, like sweet incense, was percolating through the door adding to our desires, but I realized by this time that the object for which we came was an irridescent dream and I began by pantomimic signs to Steve that it was time to vamoose for a more congenial atmosphere, for though it was extremely warm the chilly surroundings were beginning to affect me. As a last effort, Steve drew his erstwhile friend's attention to his excellent spring-house

that loomed up outside, thereby making a play for a glass of sweet or buttermilk, this proved ineffective and we left the old Covenanters house without even the proverbial glass of water being offered us.

Here was a man blinded by his faith, probably considering it a sin that we approached him on the Sabbath. He had no sympathy with humanity, especially with a couple of hungry oil men, though one had proved a friend in need.

Christ's reproval of the Pharisees for their criticism of his disciples for plucking corn and eating it while passing through some farmer's cornfield on the Sabbath day to apease their hunger, had no echo in this man's breast. Jonathan Edwards, the Puritan preacher's sermon "Sinners in the Hands of an Angry God" would have been more to his way of thinking.

It is pleasant to reflect that in this day and age, although in the midst of a military seismic disturbance never dreamed of in this peace loving country and which is affecting our ideals tremendously, yet, nevertheless the light has been coming for years. The air grows warm, and better ideas of God and man have been blossoming in the hearts of men and women, especially in this, our beloved America.

As we left the unhospitable roof and wended our way down the dusty road, we were filled with everything but eats and gave vent to our feelings with a few expressive expletives. A jay bird, with his beautiful plummage shimmering in the bright sunshine, was chattering away to his mate across the road and we in imagination almost thought he was kidding us about the old jay we had just taken leave of.

Retracing our steps to the gusher we were just in time to get a pressing invitation from a number of pipe line boys who were just preparing their meal from well filled buckets and baskets. This bidding was accepted with alacrity and we were soon again at peace with the world, the flesh and the devil. There were present that day Wm. M. Holliday, the veteran gauger, who still glides like a young fellow over dale and hill, running oil in district No. 31, D. H. Pew, C. A. Hite, H. Z. Wing, E. P. Shetter—death, the prompter, has rung down the curtain upon these four well known pipe liners but their names are kept green in memory by those who were with them in their day. If the sympathies of life extend beyond death's portals, the happiness even of the blessed may be enhanced by a knowledge that their old companions are cheerfully taking life's tasks and rejoicing in the gladness that remains to them.

The oil fields of Pennsylvania have many unpublished histories and stories which far surpass the wildest dreams of the imagination. The perils of the torpedo has furnished material for some intensely interesting adventures, some of them almost unbelievable but nevertheless actual occurrences. The average man is loth to take these stories literally and only the oil field workers can understand their possibilities.

When the Roberts Torpedo Company, by patent right, held the exclusive authority to shoot wells by means of torpedoes exploded in the producing rock in order to increase the well's output, it brought into existence a set of men who practiced illegal shooting of wells. These men were known as "moonlighters," and Roberts had many spies and detectives employed to hunt these men down and, when caught, they were prosecuted to the full extent of the law.

It was a spring night in the latter 70s

when one of these "moonlighters" had an engagement to shoot a well near Criswell, Penna. He was approaching the well with his outfit when he received a warning from one of the drillers that a Roberts detective had been seen near the well and for him to secrete his glycerine and get away as quickly as possible. The farmer on whose land the well was located permitted the shooter to bury the cans in a field near by, with the understanding he was to remove them as soon as the coast was clear. The shooter, however, was so closely watched that he did not get an opportunity to recover his goods and shortly afterwards left for Bradford. The farmer was much exorcised that the "shooter" did not return and in the mean time the clover had grown so rapidly that the place where the high explosive had been placed was entirely obliterated. The farmer did not dare to plow or even to cut the grass and was much nonplussed what to do as he realized the danger in digging around to find the stuff. One day he turned a herd of hogs into the field to feed. Some days afterwards there was a terrible explosion that shook up the neighborhood, destroyed all the glass windows of his home and blew part of his barn away. Going to the field where the explosive had been stored he found a big hole in the ground and bits of flesh scattered for several hundred feet which had once made up his herd of hogs.

With swinish perversity the hogs had evidently dug up the cans causing them to explode, thus butchering themselves in a manner not satisfactory to the owner.

There have been narrow escapes from death while shooting wells, but as a rule where accidents occurs the one it befalls never gets the second chance.

Wells suddenly flowing while the torpedo is being lowered in the well is always a source of danger for the shooter, but the experienced man is braced for any untoward event of this kind and there are numerous instances where the long tin tube has been caught as it came up with the oil. A thrilling and unfortunate affair, however, occurred in Butler county, Penna., a number of years ago where a shooter after lowering the torpedo carefully in the well was startled by hearing the oil coming up and knowing the torpedo would come with it braced himself and caught it as it appeared. The man was dismayed to find the tube was leaking badly and knowing that if he stepped on a drop of the glycerine with his heavy soled boots it would mean annihilation for him, yet the drops were falling about his feet.

THORN CREEK GUSHER
The Armstrong No 2. Produced Nearly 10,000 Barrels the First 24 Hours.

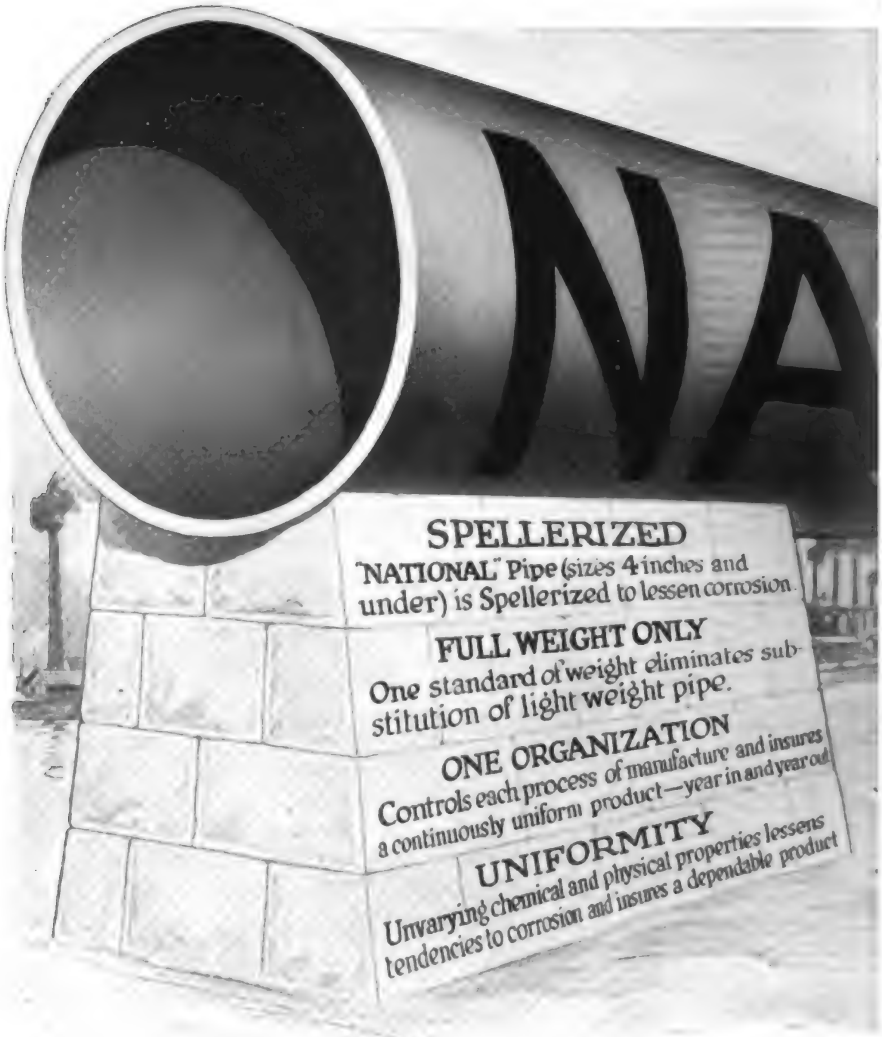
What thoughts were flittering through the man's brain as he carried the leaking tube will never be known. The mental strain and anguish became too much for him and with a frightful yell with all his strength he threw the torpedo as far as he could. There was a terrible explosion and the poor fellow was blown to fragments.

Torpedoing wells to make them more profitable producers was discovered early in the oil business and many queer things have happened through its agency.

October 26, 1884, the Armstrong well was drilled through the sand at Thorn Creek without a show of oil. Sam Boyd, one of the owners, determined to not give up the well as being dry until it was tested with a heavy shot. What occurred is historical.

The following graphic tale is worth repeating in conclusion of these imperfectly told stories of the past:

Those who stood at the brick school house and telegraph offices in the Thorn Creek district today and saw the Semple, Boyd & Armstrong No. 2 torpedoed, gazed upon the grandest scene ever witnesed in oildom. When the shot took effect, and the barren rock, as if smitten by the rod of Mozes, poured forth its torrent of oil, it was such a maginficent and awful spectacle that only a painter's brush or a poet's pencil could do it justice. Men familiar with the wonderful sights of the oil country were struck dumb with astonishment as they gazed upon this mighty display of nature's forces. There was no sudden reaction after the torpedo was exploded. A column of water rose eight or ten feet and then fell back again, and some minutes elapsed before the force of the explosion emptied the hole, and the burnt glycerine, mud and sand rushed up in the derrick in a black stream; the blackness gradually changed to yellow. Then with a mighty roar the gas burst forth. The noise was deafening. It was like the loosing of a thunderbolt. For a moment the cloud of gas hid the derrick from sight, and then as it cleared away a solid golden column, half a foot in diameter shot from the derrick floor 80 feet through the air, till it broke in fragments on the crown pulley and fell in a shower of yellow rain for rods around. For over an hour that grand column of oil, rushing swifter than any torrent, and straight as a mountain pine, united derrick floor and top. In a few moments the ground around the derrick was covered inches deep with petroleum; the branches of the oak trees were like huge yellow plumes, and a stream as large as a man's body ran down the hill to the road, where it filled the space beneath the bridge at that place, and continuing down the hill through the woods beyond the spread out upon the flats where the Johnson well stands. In two hours these flats were covered with a flood of oil; the hillside was as if a yellow freshet had passed over it; heavy clouds of gas, almost obscuring the derrick, hung low in the woods, and still that mighty rush of oil continued. Those who had at first estimated it at 50, 150 or 200 barrels an hour, raised their figures to 300 or 400, and some to 500 barrels an hour. Dams were built across the stream that its production might be estimated, and the dams overflowed and were swept away before they could be completed. Where it swept the flats a couple of boards were set up on edge, and the stream turned between them, and it filled the space and ran over the sides. People living along Thorn Creek packed up their household goods and fled to the hillsides. The pump station a mile and a half down the creek from the well, had to extinguish its fires



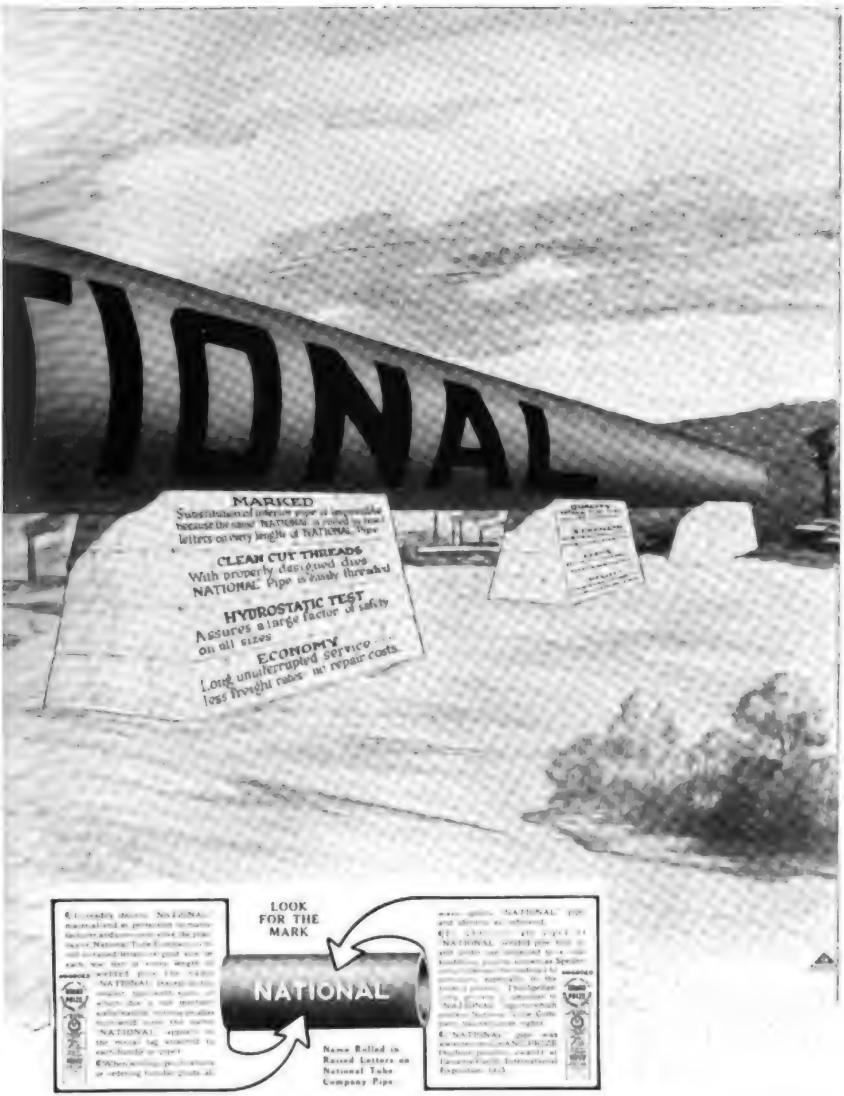
A Foundation of Quality

¶ The first steel pipe (300 tons) was made in 1887 at Riverside Iron Works (now Riverside Works of National Tube Company's twelve plants).

¶ In 1916—29 years later—over two million tons, or about 90% of the entire wrought tubular production throughout the whole country, was steel pipe.

¶ This phenomenal increase, as a whole, is based in large measure on the bed-rock foundation of the merits of "NATIONAL" Pipe which, having maintained from the beginning an unvarying high standard of quality, has been and still is a leading factor in the production and development of steel pipe.

¶ "NATIONAL" Pipe is a quality product—a quality that is certain and unchanging.



¶ Write for a copy of "NATIONAL" Bulletin No. 11—HISTORY, CHARACTERISTICS AND THE ADVANTAGES OF "NATIONAL" PIPE—a copy will be sent free to anyone whose letterhead or position would indicate a legitimate use.

It pays to be NATIONAL*ly* Prepared

NATIONAL TUBE COMPANY

General Sales Offices, Frick Building **PITTSBURGH, PA**

DISTRICT SALES OFFICES:

Atlanta Boston Chicago Denver Kansas City New Orleans New York
Omaha Philadelphia Pittsburgh St. Louis St. Paul Salt Lake City

Pacific Coast Representatives:

U. S. STEEL PRODUCTS CO., San Francisco, Los Angeles, Portland, Seattle.

Export Representative: U. S. STEEL PRODUCTS CO., New York City.

that night on account of the gas and oil, and all fires around the district were put out. It was literally a flood of oil. There is no one who saw it, but that estimates the well made over 500 barrels an hour from 2 o'clock till 4; and that it made over 8,000, some say 10,000 barrels the first 24 hours after being shot. It was as if the whole production of the Allegheny field was pouring out of a single well, and flowing down the hillside. The casing-head was on and the tools with the oil saver hung in the derrick; but it was a terrible place to put men in. Mr. Denniston, the foreman, while endeavoring to get the tools in the hole was overcome by the gas and fell under the bull wheels. He was rescued immediately and carried to a driller's shanty and medical aid summoned. For two hours he remained unconscious, but was able to be at work the next day. The owners offered $300 to any man who would turn the oil into the tanks. Ed Clark, Pat Connors, Billy Gardner and Mark Larkins undertook the job of shutting in the largest well ever struck in the oil region. The packer for the oil saver was tied on at the bull wheel shaft, the tools placed over the hole and run in. But when the cap of the oil saver reached within two feet of the casing head, the pressure of the solid stream of oil against it prevented its going lower, even with the suspended weight of the 2,000-pound tools. Two long levers were then obtained and put one on each side of the oil saver. The ends were fastened at one side of the derrick, and pressure applied to the other ends until the cap was slowly forced into position, and the set screws turned on it. The weight necessary to do this, including the tools hanging to the saver, must have been nearly 3,000 pounds. A casing connection and tubing lines connected the well with the gas tank. From the top of the tank were two gas escapes standing 20 feet high, and eight two-inch lines were filled full, and two streams of oil shot up through the gas escapes higher than the derrick, resembling two streams playing from a fire engine. It was late in the afternoon before the well was shut in, and no accurate gauges could be obtained on it. One man claims 100 inches in a 600-barrel tank in a little more than an hour, or about 425 barrels. For over 100 feet around the well the ground was covered to a depth of several inches with the yellow crude; the trees were loaded with it, and it dripped from their branches for days afterward. The mixture of the salt water with the olive gave it a bright coloring, so that the ground and trees where it fell were of a rich orange hue, while the derrick, being spotted with the fresh oil from the gas escapes, was of a brilliant golden color. Looking at the well and its near surroundings through the woods, it was as if the bright sunshine was falling through the trees and flooding with light this particular spot."

Recently I stood on the ground made famous by the great Thorn Creek gushers, that played their animating part in furnishing the cosmic with its supply of petroleum in the momentious years of 1884-85.

The history of this place, its romances; its joys, produced by acquisition or expectation and its anguish of mind occasioned by failure from which might be woven, with the warp and woof in the loom of life, stories of entrancing interest.

Silence now reigned supreme with only an interruption by a feathered songster whose pleasing melody filled the dreary spot, breaking the dull monotony.

The placid Thorn Creek still flows as of yore around the foot of the hills, twisting and turning until lost in the distance, now clear and free from discoloration or contamination of the unctuous fluid. Not a single derrick raises its crowned head where once a forest of them dotted the hillside. The little brick school house that went out of commission for a time with the striking of the Phillips well, has long since been replaced with a new and more commodious frame structure. The half-acre upon which this building stands could have been leased for $40,000, giving the township an endowment that would have paid the school tax for all time but legal complications arose and the conservative directors would not, like Columbus, take a chance.

The trees that the great wells had drenched with their golden output stand now as sentinels of the dead past. These trees will never again feel the friendly tap of the woodpecker, nor thrill under the rising tides of sap, dead! through the ravages of the briny water and oil that deluged their branches in the long ago; and the merry crowd that surged around these trees, their blood tingling from suppressed excitement as they looked on or participated in the thrilling scenes, where are they? Most of them have been rowed across that river without shores, with old grizzly Charon at the helm.

THE DRAKE MONUMENT IN WOODLAWN CEMETERY, TITUSVILLE, PA.

Unveiled October 4, 1901. The gift of Henry H. Rogers, Standard Oil magnate. The name of the donor was not generally known until his death in 1906 when his name was added to the inscription on the memorial with the words: "In grateful recognition of his eminent services in leading the way to the economic production of petroleum, the world's best and cheapest source of light."

THE BIG PIPE LINE PICNIC

Celebration of the 58th Anniversary of the Drake Well at Conneaut Lake, on Thursday, August 2nd, 1917

Respy Yours &c
E L Drake

"Lest we forget"—it is becoming that we should gather once each year to keep in memory that great event which occurred in August, 1859, when Colonel Edwin L. Drake drilled into the rock giving to the United States and eventually to the world the wonderful mineral oil which has proven such a factor in providing man with utilities that would now seem almost indispensable in the economy of life.

It was with this commendable idea in view that the first pipe line picnic was held in 1887 and has been successively and successfully carried out every year since. It was, also, the principal motive of the coterie of oil men in launching this magazine on the uncertain waters of oil country journalism in the year 1906, not as a commercial enterprise, but for the purpose of collecting together the many untold, romantic stories which Western Pennsylvania oil fields have so extensively provided, and by photographic reproduction and pen painting placed in its pages where they will survive long after those now playing the oil game have passed and crumbled into dust.

Eleven years have had their entrances and exits since the Oil and Gas Man's Magazine made its first appearance and it is a very healthy periodical today, having a wider circulation and possibly a bigger one than any similar publication extant, following a line of work never before attempted in an oil journal.

58 years ago Col. Drake completed his famous well, after displaying courage that surmounted those difficulties that beset him at every point and gave to the world the greatest and most useful discovery vouchsafed to man during the 19th century. There are thousands of men in the world today who have reason to be grateful to Col. Drake and those other great men who backed him in his efforts, and who ought to hold their names in thankful remembrance for they certainly blazed the trail for them without which their own efforts would have been valueless.

Col. Drake, from all accounts, was a plain every day American, not gifted with that sharpness or keenness of perception possessed by some of his associates in the Seneca Oil Co., but it would seem he was destined to do the work he successfully accomplished. That he lacked vision and failed to profit by his discovery and finally became a victim of the world's neglect, tasting the cup to its bitter dregs in his privitations, should not militate against his fame in the historical niche that he now occupies in the

archives of oil region history. It must not be lost sight of, however, that Drake could not have accomplished his work without the assistance of those sagacious business men whose names will ever remain linked with the birth of the oil business, although no monuments commemorate their achievements: They are George H. Bissell, Dr. F. B. Brewer, Samuel M. Kier and Jonathan Watson.

The following comes from an iconoclastic writer who has given considerable attention to early oil history and briefly relates his conclusions:

THE DRAKE WELL

After the demise of Col. Drake in 1881, a controversy of more or less intensity and bitterness arose throughout the Oil Country as to whether or not he was entitled to the distinction of being the discoverer of petroleum and the founder of a new and today world wide industry. This controversy was settled at the time in Drake's favor more, perhaps through the influence of partizans than the merits of his real work. What Drake did, stated in blunt terms, was to drill a well 69 feet in depth. In this work he met with and overcame some difficulties and was laughed at as a visionary while proceeding with his task. Previous to this undertaking wells had been drilled elsewhere to the depth of 1200 to 1500 feet for salt. The tools and appliances used in these latter ventures were adopted by Drake. Hence he cannot be truly said to have been an innovator in any way. The very idea that oil would be found in the rock was not Drake's but was supplied by the studies and investigations of experts. The organization of the company which drilled the first oil well was not the work of Drake; the funds even were supplied by others. Drake's connection with the venture was wholly accidental. All he seems to have done was to have devised the "drive-pipe", that is to say instead of digging a shaft through the earth from the surface to the first rock, he simply drove a hollow pipe through the soil and thus overcame easily what had been a serious trouble to the salt drillers. Drake was simply a contractor or superintendent of field work. That he should be held up and accepted as the symbol, the founder and the prophet of Oil is quite paradoxical. We are not finding fault with all this, but merely stating facts for the benefit of another generation.

That Mr. Rogers, the donor of the monument to Drake did not desire his name to be inscribed upon the completed fabric during his lifetime, may or may not have been due to the curious fatalism which selected the Colonel as the First and Greatest of Petroleum Adventurers.

Drake's biographers and eulogists make him the 'great oil man.' Well, after all, whether the crown is deserved, it must be admitted that it is on his head.

No man is any greater than his biographer, and the biographers have made Col. Drake a great man.

OBITUARY.

HOWARD L. SCRAFFORD, vice president of the Eureka Pipe Line company, with many friends among the oil men of other fields as well as those of the east, died of apoplexy May 31st at the home of his daughter in Pittsburgh. He had been at his office during the day, and left for his home shortly after 4 o'clock, accompanied by E. G. Wright and his daughter, making the trip in Mr. Wright's automobile. On the way home he was taken ill and had to be carried into the house. He died within an hour. He had a large acquaintance in the eastern and western oil fields, having been engaged in the pipe line business for the past 40 years. He began his activities with the United Pipe Lines at St. Petersburg, Clarion county, and when the Bradford field was opened was made foreman in the Olean and Duke Center districts. In 1890, when the West Virginia fields were coming to the front, he was transferred to Mannington. In 1895 (when the pipe line branch had reached such proportions that it was found necessary to make two districts of the eastern fields, the National Transit company promoted him to the position of general superintendent of the Southern division. He held this position up to the time of the dissolution, when he was elected vice president and director of the Eureka Pipe Line company. He was a member of Olean Lodge, F. and A. M. and a member of the Scottish Rite of the Northern jurisdiction. He was born at Leyden, N. Y. He came to Pittsburgh about twenty years ago. His daughter, Mrs. Moritz A. Kretzhmar, survives."

His funeral was held in Pittsburgh on June 4, and was largely attended by employes of the various pipe lines with which at one time or another Mr. Scrafford was connected. It can be truthfully stated that here was a man who was held in the highest esteem and affection by those employed under his direction.

MRS. D. A. DENNISON, wife of the associate editor of the Oil and Gas Journal, and former well known editor of the Bradford, Pa., Era, died at Bradford on May 25, after an extended illness. Besides her husband, Mrs. Dennison is survived by four children, three sons and one daughter. We extend sincere sympathy to D. A. D.

CARROL E. CRAWFORD of Emlenton, Pa., prominent oil and gas producer and banker, died May 31 at the West Penn Hospital, Pittsburgh, of cirrhosis of the liver. He was connected with many financial institutions and gas supply companies as officer and director. He is survived by two daughters and one son, also three brothers, Geo. W., J. B. and Fred W. Crawford and one sister Mrs. L. E. Mallory of Bradford, Pa.

MAJOR A. C. HAWKINS, pioneer in the oil business, died suddenly May 28th,

at his home in Bradford, Pa., aged 84 years.

He was born in Youngstown, Westmoreland county, Pa. After serving in the Civil war, he engaged in the mercantile business in Pittsburgh, going to Bradford in 1879 where he entered the producing business successfully. He was one of the original stockholders of the Tidewater Pipe Line.

We extend our sympathy to A. C. Beeson of Huntington, Ind., where he is connected with the Indiana Pipe Line, in the loss of his wife who passed away at St. Joseph's Hospital, Fort Wayne, Ind., June 11, after an extended illness. Mr. Beeson was superintendent of the United Pipe Line and lived with his family at Petrolia, Pa., during the 70s, leaving for Oil City, Pa., in 1879. Besides her husband, Mrs. Beeson leaves four grown up children.

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*John Galloway, pioneer oil man and well known to the "old timers" in the oil business, died May 19th at his home in Jamestown, N. Y. Mr. Galloway was born in Canada, June 3, 1839, coming to the oil country in 1861. He was not afraid of work and went through all the ramifications of the business to success.

Wm. C. McBride, aged 58, died May 21, at his winter home in Pasadena, California, after an illness of three months due to nephritis. The passing of Mr. McBride removes one of the most successful, energetic and best known oil operators in the country, and his death was a distinct shock to his many friends. The funeral services were conducted in the new cathedral at St. Louis, which Mr. McBride had recently aided by a gift of $250,000.

Levi Smith, aged 63 years, millionaire oil man of Warren, Pa., died suddenly on a train at Elkhart, Ind., while enroute home from California, where he had been sojourning for his health.

George G. Stage, pioneer oil operator in Butler county, Pennsylvania and also prominently connected with the development of its coal resources, in both of which he was very successful, died May 9th at his home in Greenville, Pa., aged 75 years.

A number of years ago Mr. Stage, in conversation with the writer, drifted into a reminiscent vein touching his early ventures in the oil game. Among other interesting stories he told how John D. Rockefeller came to his rescue which saved him from heavy financial loss and possible bankruptcy.

When Mr. Rockefeller was in the commission business in Cleveland, Ohio, he frequently visited Greenville on business connected with his firm. Mr. Stage was in business there and a customer of Mr. Rockefeller, and the two became well acquainted. On one occasion Mr. Stage favored Mr. Rockefeller by taking a car load of material that had been shipped to other parties which had not been accepted.

When Petrolia and Karns City were giving forth their floods of oil the pipe lines found it quite difficult to care for the oil and many tanks were running over. Stage had two fine wells at Karns City and he was getting very little of it cared for by the pipe line people. About this time he happened to meet Mr. Rockefeller on a train. After a friendly greeting, Mr. Rockefeller inquired of Mr. Stage how things were going with him. Stage replied that everything would be all right if he could get his oil

cared for at Karns City. Mr. Rockefeller became interested at once and inquired the location of wells which information he noted down in a little book with the remark "that he would see what could be done for him."

The next day on visiting his wells Mr. Stage was surprised to find his tanks all empty and from that time forth his oil was regularly cared for. Another illustration of what has often been said, "that Mr. Rockefeller never forgot a favor, no matter how small."

George Stage was one of those optimistic, bonhomie sort of fellows whose presence always gave pleasure to any gathering, placing every one in a jovial humor.

He is survived by three daughters and one son.

Natural Gas Association.

The 12th annual meeting of the Natural Gas Association of America was held at Buffalo, N. Y., May 14-17. The attendance was the largest and most representative of any previous convention. Great interest was manifested in its proceedings. The feature of the meeting was an address by A. C. Bedford, president of the Standard Oil Co. of New Jersey, who recently succeeded to the office by the death of John D. Archbold. His subject was "Mobilization of Our Industrial Resources for War." On account of length we cannot print it here, but we will be glad to send it to any subscriber on application.

The officers elected by the convention were as follows:

President—Joseph F. Guffey, Pittsburgh, Pa.

Vice President—K. C. Krick, Columbus, O.

Secretary and Treasurer—Thomas C. Jones, Delaware, Ohio.

Commercial Secretary—David O. Holbrook, Pittsburg, Pa.

Directors—A. A. Armstrong, Pittsburgh; James W. McMahon, Toledo, O.; Clifton W. Sears, Mansfield, O.; John H. Maxon, Muncie, Ind.; Harry J. Hoover, Cincinnati, O.; Glenn T. Braden, Tulsa, Okla.

Glenn T. Braden, vice president of the association, was in line for the presidency, but he declined the honor because of business engagements; hence President Guffey graciously consented to serve another term.

After a rather desultory consideration, Louisville, Ky., was chosen as the place of meeting in 1918, M. M. Walsh's invitation being accepted because the Tulsa members, while anxious to secure the honor, were of the opinion that the Oklahoma metropolis lacked hotel accommodations to properly stage a really successful entertainment. In the event that the Louisville armory is not available, some other city may be selected that can offer room for the exhibits.

Oil Markets And Field Developments

Conditions Somewhat Mixed. Late Kentucky Completions Unsatisfactory. Kansas the Bright Star in the Oil Firmanent. The Government and the Price of Oil.

While we are constantly being advised through the press and various periodicals that oil is to be advanced, yet, ipso facto, the price remains the same, there having been but one change in the principal grades of oil since January 9. This change was made on April 17, when the Penna. Grade and other Eastern oils were advanced from 2 to 5 cents, according to grade. The Mid-Continent has remained stationary at $1.70 so far this year. California, however, has had an addition of 25 cents placed to the various degrees of gravity which are now quoted from 98c to $1.32 per barrel.

The conditions undoubtedly warrant a better price for the higher grades of oil, not but what the price seems large enough, but that the price of material has advanced so that the operators are handicapped in making tests of territory that is more or less hazardous. In order to provide oil to offset the loss by decline of old wells there must be constant drilling and new ventures made, so the moral is obvious.

There is another disturbing element that will retard drilling unless provided for, and that is the possibility of government control. This has been occasioned by alleged reports said to have emanated from Secretary Daniels of the Navy, forecasting such intention. It would seem that the embargo that has been recently established by this government on all shipments of a vital character to foreign ports must in a measure obviate the necessity of any drastic intention in the way of commandeering the oil supply, as from all reports there is plenty of oil for this country and also its allies if it is not diverted to enemy territory.

The only disquieting feature in the oil country at present is the high prices demanded for material necessary in the drilling and operating of wells; and in some localities the utter impossibility to get stuff at any price. This places an embargo effectually on new work, especially in the small well territory and accounts for the little work being done in certain districts in the Eastern fields.

There never was a time in the history of the oil business when so many oil companies were being organized and making a bid for the dear people's money and apparently getting it too, as at present; money being plenty there are hundreds of anxious speculators ready to get in the game where visions of wealth appear so vivid, made so by the alluring prospectus that are so plentifully being advertised and distributed. Time will tell the old, old story of deluded investors made wise about the oil business but at the price of reduced bank balances.

The organization of many big oil

companies with millions behind them give assurance of plenty of wild cat ventures in the great western fields, providing supplies can be obtained. The failures in the Mid-West the past three months are astounding and represent many thousands of dollars blown in, in the attempt to discover new pools. This does not appear to deter others from following up the line of hunt, as in the Kansas field alone there are approximately 300 rigs up and wells drilling that are purely wild cat locations. This work is well distributed over the eastern and middle part of the state effecting about thirty counties.

Kansas and Oklahoma are still the great producing centers where the source of supply of petroleum will continue to come from for an indefinite time. Kansas is showing the greater activity. The Eldorado pool in Butler county, is the center of attraction. The month of June results were far beyond expectations. There were some preeminently rich completions in both May and June, which has had the effect of creating a long string of new work. In June there were 88 wells completed, 6 of which were dry and one gasser, the 81 remaining giving a total new production of 25,000 barrels. With the tremendous efforts being put forth to find new pools, it is hardly unlikely but what some of them will meet with success. Nature is plethoric in all of its gifts, never having been known to do business in the retail way, and it is not likely but what there will be oil a-plenty until something arises far in the future to take its place.

The following is presented to the public by the U. S. Geological Survey, pointing out promising areas in Southern Kentucky:

"MORE OIL IN KENTUCKY"

"To assist in increasing the oil production of the country the United States Geological Survey, Department of the Interior, has been investigating regions near Irvine, in eastern Kentucky, and in Allen county, in southern Kentucky. In parts of both these regions the geological structure seems to be favorable to the accumulation of oil pools. It should be remembered, however, that the present falling off in the country's output of petroleum is due largely to lack of casing for use in drilling and lack of pipe for laying new pipe lines for transporting the oil. When these most serious deficiencies shall have been remedied the oil companies will be able to increase somewhat their output. Naturally their quickest way to get a larger supply of oil would be to "drill in" more of the proved territory already held in lease. The next quickest market returns for new exploration should come from boring in regions where the geologic structure is favorable to the accumulation of oil. Proximity to existing oil-transportation routes will, of course, also be an important consideration.

The presence of oil in Allen county has been known for 60 years, but only recently has it been produced there in commercial quantities. Nearly all the present production in the county comes from three well defined oil pools—the North Petroleum pool, 4 1-2 miles southwest of Scottsville, including the Richards, Cherry, Tucker, and Crowe leases; the Rodemer pool, half a mile west of Rodemer station; and the newly developed Wildwood pool, a mile south of Wildwood station. The strata in the North Petroleum and Rodemer fields, and probably also those in the Wildwood field, are arched upward into well de-

fined domes or anticlines that trend east-north-east.

On the other hand, the Hinton wells, northeast of the Rodemer pool, are probably in a syncline or trough formed by a downward flexure of the beds. Moreover, the Miller wells, on Rough Creek, are in the bottom of a saucer-shaped downwarped basin, a form of structure which in most fields is unfavorable to the accumulation of petroleum. Evidently the structure of the beds influences but does not fully control the location of the oil pools. In dry holes the character of a formation that elsewhere bears oil indicates that the size of the pores is in many places the factor that determines the position of an oil reservoir. However, on balancing the somewhat contradictory evidence derived from a study of the producing wells in the county, it would appear that in this region, as in most oil fields, there is much more likelihood of discovering new pools in places where the lay of the beds is anticlinal than elsewhere, though the beds here lie so nearly flat that the anticlines or domes can be discovered only by careful survey.

Fortunately there are several untested anticlines or domes in Allen county, some of which may contain valuable reservoirs of oil. The most pronounced anticline in the neighborhood of Scottsville trends east-northeast from Petroleum and is crossed by Big Trammell Creek below the mouth of Rough Creek. Geologist Kirtley F. Mather, of the Survey, suggests that test wells be drilled on and near the crest of this anticline, which is 4,300 feet east and 1,200 feet south of the south end of the railroad bridge crossing Big Trammell Creek. The anticline lies mainly southwest of Big Trammell Creek but extends across the valley flat into the V. Brown farm."

We are not optimistic over Kentucky, probably, it may be due to prejudice from having some experiences with its uncertain characteristics and through a careful study of its past history. We are drawn to the conclusion, therefore, that those who are pinning faith to Kentucky as a great oil producing state are doomed to disappointment. Of the wells completed in the past month over one third were dry. The trouble with Kentucky is that no formation has yet been opened up which shows a continuity and cohesiveness sufficiently great enough to indicate a pool of large dimensions. So far, the strata explored is broken up and not favorable for the holding of any great amount of oil like the pools found in the Mid-West fields. The Irvin pool in Estill county, is the best that has as yet been discovered and it shows signs of definement and exhaustion. In the meantime many thousands of acres have been leased up and their exploitation goes merrily on.

Tionesta, Forest county, Penna., is having a little oil excitement occasioned by the striking of a well on Peters Run, within the borough limits. The well started off at 200 barrels but has since declined to about 30 or 40 barrels. The well is shallow; the sand is said to correspond with the 4th sand found in Clarion county. A number of rigs have already sprung up and other tests will be made.

Since the forepart of this article was written, President Wilson's statement regarding patriotism and profits has been received, which will no doubt be satisfactory to the oil interests. Mr. Wilson, repeats that this is a war for our lives, in which profits have no place, and so far as he and the government can prevent, there shall be no profits beyond what is essential to harmonious

operation at high pressure to meet the demands of the struggle 100,000,000 people are making to make the world safe for our institutions. Mr. Wilson is clear in his position that the government will protect the producing interests in a fair profit to stimulate outputs but beyond that refuses to listen to any linking together of patriotism and profits.

It might be stated here that the oil business is different from any other commodity from the fact that oil has to be found and large sums have to be expended in experimental work. The incentive for the continuation of this wildcatting is the certainty of large returns if oil is found. Take away this incentive and place it on a small percentage basis and the drill be hung up.

The submarine blockade does not appear to be effecting our petroleum shipments abroad although they have succeeded in getting several of our tankers and sending them to the bottom.

The London Petroleum Review publishes official figures showing that during the first five months of this year the imports of gasoline and napthas, or what the British term motor spirit, were over 54,000,000 gallons. In 1916 during the corresponding period the amount was 47,800,000 gallons, for the same months in 1915, the quantity was 46,500,000 gallons, and 42,000,000 for the 1914 period. Thus there has been an increase in the imports of gasoline for each year during the first five months, and the greatest increase has been during the period covered by the submarine blockade.

The following comparative summary of crude-pertoleum movement in May, 1917, represents the operations of 145 pipe-line and refining companies that handle or receive oil direct from productive fields east of the Rocky Mountains and is compiled from reports received by the United States Geological Survey, Department of the Interior, prior to noon of June 28, 1917.

This compilation includes statements filed by: 37 companies operating in the Appalachian field; 9 companies operating in the Lima-Indiana field; 6 companies operating in the Illinois field; 61 companies operating in the Oklahoma-Kansas field; 12 companies operating in the Central and North Texas field; 6 companies operating in the North Louisiana field; 6 companies operating in the Gulf Coast field; 8 companies operating in the Rocky Mountain field.

Crude Petroleum Moved from Field Sources.

Barrels of 42 Gallons Each.

Field—	May 1917	May 1916
Appalachian	2,125,702	1,943,252
Lima-Indiana	312,134	322,489
Illinois	1,423, 89	1,570,786
Oklahoma-Kansas	10,797,881	.....
Central and N. Texas	916,082	823,322
North Louisiana	798,962	1,066,110
Gulf Coast	1,578,750	1,511,652
Rocky Mountain	7 19,621	.....

Crude Petroleum Delivered to Refineries or Consumers.

Barrels of 42 Gallons Each.

Field—	May 1917	May 1916
Appalachian	2,158,763	2,566,830
Lima-Indiana	1,489,485	1,520,975
Illinois	720,723	604,504
Oklahoma-Kansas	6,872,517	.....
Central and N. Texas	1,330,528	994,904
North Louisiana	1,018,639	812,993
Gulf Coast	1,659,688	1,412,249
Rocky Mountain	743,338	.....

Stocks of Crude Petroleum at End of Month.

Barrels of 42 Gallons Each.

Field—	May 1917	May 1916
Appalahian	7,145,621	7,719,177
Lima-Indiana	4,636,746	5,093,064
Illinois	4,808,203	7,417,609
Oklahoma-Kansas	93,546,562	.....
Central and N. Texas	2,672,153	4,781,565
North Louisiana	4,475,737	4,998,196
Gulf Coast	8,677,057	9,986,105
Rocky Mountain	798,094	.....

As between April and May, 1917 the foregoing summary of petroleum moved from field sources shows an appreciable gain in May that is gratifying both as to quantity and as to distribution, although it records in some areas a disparity in this month as compared with May, 1916.

As indicated by the table of deliveries to trade, crude-petroleum consumption was appreciably greater in May than in April, 1917, and decidedly greater in May, 1917, than in May a year ago.

Slight gains in May in stock accumulations in the Appalachian, Lima-Indiana, Oklahoma-Kansas, and North Louisiana fields are encouraging despite corresponding losses in other fields.

ACTIVE OIL STOCKS

	Bid	Ask
Ang-Am.	19½	19¾
Atl. Ref.	930	950
Borne-S.	400	425
Buckeye	98	102
Chesebh.	390	405
Colonial	50	70
Continental	490	510
Crescent	37	40
Cumberland	150	170
Eureka	200	210
Galena	145	150
do pfd	135	145
Ills. Pipe	208	212
Ind. Pipe	95	100
Nat. Transit	14	15
N. Y. Transit	175	190
Northern	95	100
Ohio Oil	340	350
Prairie Oil	500	510
Prairie Pipe	270	274
Solar Ref.	320	340
Southern	190	200
S. P. Oil	287	205
SW Penn	110	113
S. O. Cal.	258	262
do Ind.	750	760
do Kan.	465	490
do Ky.	340	360
do Neb.	490	510
do N. J.	582	585
do N. Y.	282	285
do Ohio	420	440
S. & F.	90	105
Un. Tank	92	94
Vac. Oil	350	360
Wash. Oil	25	32
Penn-Mx.	45	53
Int. Petroleum	13¼	13¾

Independent Oils

Elk Basin	10	10½
Cities Ser.	277	279
Pierce Oil	11¾	12¼
Midw. Ref.	145	150
Trop. Oil	7½	8
Cosd. Ref.	12⅞	13⅛
Sapul. Ref.	10⅜	10¾
C. O. & G.	12⅞	13⅛
do pfd.	4⅝	4⅞
O. P. & R.	9¼	9½
Atl. Petro	7	7½
Merrit Oil	30	30½
Midw Oil	77	79
Os-Ho Oil	9¼	9½
B. O. & G.	2⅛	2¼

THE CRUDE MARKETS

There has been a further advance in California crude prices during the past month of 10 cents, but aside from this no change has been reported. For the principal grades of crude of the various fields the purchasing prices of the Standard subdivisions:

Pennsylvania, $3.10; Mercer Black, $2.18; Corning, $2.40; Cabell, $2.37; Somerset, $2.20; Ragland, $1.00; North and South Lima, $1.88; Wooster, $2.18; Plymouth, $1.83; Princeton, $1.92; Illinois, $1.92; Oklahoma, and Kansas, $1.70; Yale, $1.70; Indiana, $1.78; Healdton, 90 cents; Electra, Henrietta, Thrall, Strawn and Moran, $1.70; Crichton, $1.40; DeSoto, $1.80; Caddo, 32 gravity, $1.75; Caddo, 35 gravity, $1.80; Caddo, 38 gravity, $1.90; Caddo, regular, $1.00; California, from 98 cents to $1.32.

THE REFINED MARKETS.

With the exception of an advance of 10 points for export oil in barrels, due to increased cooperage cost, no change is reported in the quotations for refinery products as compared with those of a month ago. The unfavorable weather for the use of autos has had a considerable effect on the demands for gasoline, but the demands continue strong and it

is not believed that there is any accumulation of gasoline stocks. For the principal refinery products the folowing: are wholesale prices, car lots, in barrels, with bulk prices 5 cents lower:

ILLUMINANTS.

Water White, 150 degrees.....12 c
Prime White, 150 degrees.....11 c
Water White, 125 fire test,.....
49 gravity.....13 c

NAPTHAS AND GASOLINE

Deod., 63 degrees, naptha.....26½c
68 degree gasoline 29½c
74 degree gasoline 34½c
86 degree gasoline 38½c

STEAM REFINED CYLINDER STOCKS

600 Fire Test, in barrels 16½c
Bulk....11¼c
650 Fire Test in barrels.....18¼c
Bulk....13½c

EXPORT. (N. Y. and Phila.)

Standard White, in barrels.....10.35c
Bulk....5.50c.
Water White, in barrels 11.35c
Bulk....6.50c

WHY CALIFORNIA CRUDE ADVANCED

The reason for the advance in the California field by the Standard Oil Company of California is explained by that company in its bulletin as follows: "The bald fact is that California is producing 265,000 barrels of crude oil a day, with a normal daily consumption of 300,000 barrels. We are running behind at the rate of 35,000 barrels each day. California oil stocks have decreased from 57,000,000 barrels on January 1, 1916, to 40,000,000 barrels on May 1, 1917. At the present rate of decline a comparatively short time will suffice to wipe out the present available fuel supply amounting to 25,000,000."

FIELD WORK SUMMARIES

The following table shows the number of wells drilled, new production and dry holes for the past month in the states named, as condensed from the Oil City Derrick's detailed report:

	Comp.	Prod.	Dry.	Gas.
New York	19	31	..	3
Pennsylvania	218	677	34	19
West Virginia	159	1,092	26	31
Southeastern Ohio	121	939	43	4
Central Ohio	65	295	11	48
Northwestern Ohio	54	546	4	..
Indiana	25	546	10	..
Kentucky and Tenn.	163	1,606	56	..
Illinois	60	1,161	10	..
Kansas	248	26,596	26	12
Oklahoma	533	26,378	106	26
Louisiana and Texas	331	63,026	106	17
Totals	1,996	122,993	432	160

For comparison with the foregoing the summaries for May are reproduced as follows:

	Comp.	Prod.	Dry.	Gas.
New York	25	52	1	2
Pennsylvania	210	477	34	19
West Virginia	135	919	31	25
Southeastern Ohio	133	1,196	41	8
Central Ohio	50	54	14	32
Northwestern Ohio	54	582	8	..
Indiana	21	432	10	..
Kentucky and Tenn.	162	5,572	38	..
Illinois	64	1,020	15	..
Kansas	236	12,778	35	12
Oklahoma	537	22,506	127	45
Louisiana and Texas	179	50,865	77	5
Totals	1,806	96,453	431	148

THE CONSERVATION OF ENERGY AND THE TRANSMISSION OF POWER

Goodyear Compass Belting

IN standard cable drilling the problem of transmission belting is of vital importance to the maintenance of low costs.

The operation of alternately raising and dropping the heavy drilling tools throws the burden onto the transmission belts, which only the best belts can withstand successfully.

Because of convincing cost records in many fields we recommend as first choice for deep drilling duty our Compass frictioned-surface transmission belt.

It is especially adapted for oil well service because of the hard finish of the outside ply forming the cover, the thoroughly impregnated construction, and the exceptional flexibility which tremendously diminishes the destructive effect of clamping.

• • •

Drilling and pumping belting, valves, packer rubbers, swab rubbers, oil rings, rotary hose and packing—these mechanical goods for the oil fields show greater economy when they bear the mark of Goodyear.

The Goodyear Tire & Rubber Co.
Akron, Ohio

· PACKING · BELTING · HOSE · VALVES ·

GOODYEAR
AKRON

Goodyear Tire and Rubber Co. And the War.

When the President called for mobilization of the industrial forces of the nation to cooperate with the national government "to help win the war," the big rubber companies were among the first to sense the true significance of the appeal and make a practical application of their loyalty—the American tire industry was found to have a warm and patriotic heart. No branch of American industry has accepted the war-time code with greater willingness and patriotism than the big tire makers.

Conspicuous among these companies that have rallied to the support of the government, enthusiastically and generously, is the Goodyear Tire & Rubber Company of Akron, Ohio. As our country was gradually drifting into the maelstrom of war, Goodyear officials added military training to the educational classes of the company's factory school and employed ex-army officers of long military experience to supervise the instruction.

Then with the call to "protect the food supply," hundreds of acres of rich land not needed immediately for building purposes were placed under cultivation. And in addition to becoming a farmer itself, the company appealed to all its employees to plant every available square foot of home garden.

A little later when the great "drive" was inaugurated by the Red Cross for new members, this company in a spectacular four days' campaign, with typical Goodyear enthusiasm, actually enlisted ninety-eight per cent of the entire working force as members of the Red Cross. In all 17,865 new names were secured.

But war is just one drive after another—on the trenches, at the front, and on the purses at home. So when the Liberty Loan campaign was launched Goodyear supported it with the same energy that characterized the former drive. A vigorous campaign for subscriptions netted 12,700 subscribers, who obligated themselves to purchase $800,000 in Liberty Bonds.

These activities however, do not constitute the sum-total of Goodyear cooperation.

Just at this time the Goodyear company is contributing the most practical kind of a cooperation in the building of dirigible airships, kite baloons for the government, and in training men to operate them. In every manner possible this company is cooperating with the government to strengthen both arms of our military service.

Demonstrating the Rittman Process.

It is announced by the Bureau of Mines, Department of the Interior, that the petroleum chemists in its employ, continuing their laboratory experiments on the production of gasoline by the vapor phase (Rittman) process, will soon give to the technical public information of importance from a commercial point of view, the work having developed valuable indications as to the theory and mechanism of the cracking process.

The type of laboratory-size furnace originally used was modified in several important details, thru which the accuracy of its operation has been notably increased. Several oils were studied which were representatives of types of cheap fuel available in different parts of the country. The temperature range favorable for the commercial production of gasoline was shown to be between 550 degrees C. (1022 degrees F.) and 600 degrees C. (1112 degrees F.). This range was studied for each 10 degrees C. interval. Pressures between 1 atmosphere and about 14 atmospheres (200 lbs. gauge, reading), were also studied and the effect of the rate of oil flow was noted. The yields of gasoline were measured and the quality of this product studied.

A bulletin is now being prepared which takes up these experiments in detail and which gives the conclusions drawn from the results obtained.

AN APPRECIATION.

The following voluntary and appreciative letter from an eminent New York divine will be of interest to our readers and advertisers. Dr. Grant's commendation of our publication is highly appreciated as he is a writer of note, an advanced thinker and a leader among men. In connection with Col. Roosevelt's congratulatory letter to the editor, as published in our last issue, it would seem that our magazine is being read in the metropolis as well as the oil producing countries.

THE CHURCH OF THE ASCENSION
5 AVENUE AND 10 STREET

New York City, N. Y.
May 3, 1917.

My Dear Mr. Bredin:—

The Oil and Gas Man's Magazine is one of the best magazines that I have ever seen. I think it is particularly fortunate not only in the way it goes at things, but also in the very large amount of advertising it contains.

I thank you for giving me the opportunity of seeing it. I notice in this issue a very ambitious and successful article by you in appreciation of Theodore Newton Barnsdall. I like what you have to say extremely.

With very best wishes I am

Most sincerely yours,

PERCY S. GRANT.

To Wm. S. Bredin, New York City, N. Y.

OIL TANKERS SUBMARINED.

The German subs. have been getting a number of oil tankers. These vessels fall easy victims of the "murder boats" from the fact of their length and slow movement.

The latest to be sent to the bottom was the Petrolite, owned by the Standard Oil Co. The vessel was armed and carried a United States naval gunner's crew. It left an American port April 30 for Italian ports, carrying oil in bulk. This submarine took all the supplies it could handle. The loss of life was about 23 men.

The American armed tank ship Vacuum, owned by the Vacuum Oil Co., a Standard subsidiary, was torpedoed and sunk by a German sub. on April 28, off the North coast of Ireland, with a loss of 23 lives, including Lieutenant C. C. Thomas, U. S. A., who was in charge of the Vacuum's gun crew.

These with the loss of the John D. Archbold, the British Sun, and the Healdton, make up quite a loss for the oil business.

The John D. Archbold, a Standard Oil Co. tanker was sent down June 10, while on return, two days out of France. Four members of the crew were lost. This steamer was 8,374 tons gross and built in 1914 at Newport News. The vessel left New York May 20 for Havre, and Rowen, France, with cargo of oil.

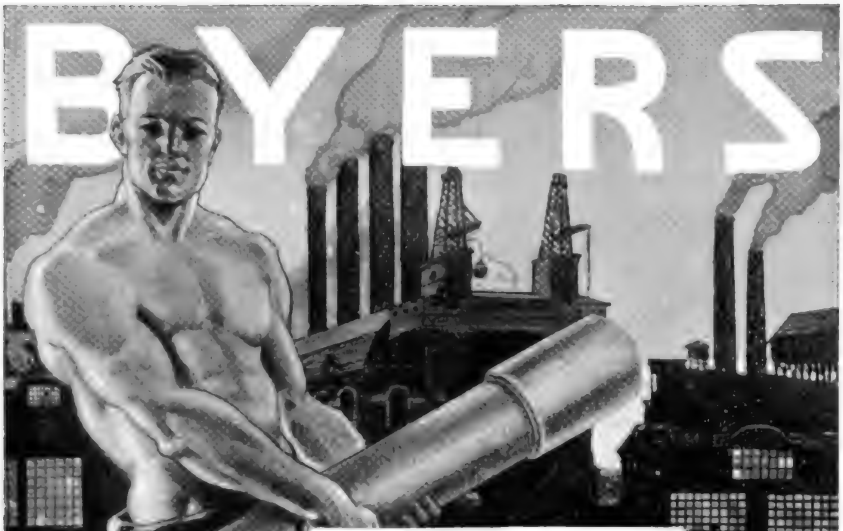
WILLIAM BARNSDALL, SR

In the sketch of the life of Theodore N. Barnsdall, which appeared in our last issue, a paragraph relating to his father, William Barnsdall, Sr., was inadvertently omitted. The paragraph was in effect that Mr. Barnsdall, Sr. drilled the second oil producer completed in America, erected and operated the first oil refinery and opened up the great Bradford oil basin. William Barnsdall, Sr. was a remarkable man being possessed of a vision in which he saw the great possibilities of the oil business and was quick to avail himself of the opportunity prepared by Colonel Drake.

MEXICAN OIL

With the fuel oil growing scarce, the eyes of the country are turned towards Mexico. There were 4,000,000 barrels shipped from Mexico last month. Carranza has placed an enormous tax on this crude oil which may be almost proprohibitive upon exports for our allies.

The American government has the matter under advisement and argument will be made both by our government and the British government for a modification of the decree. The rate is fixed at 10 per cent ad valorem on a valuation of $9.50 a ton, which is nearly twice the present selling price, making a greatly overvaluation.



The NAME and YEAR is rolled in every length
Genuine Wrought Iron
Drill Pipe
Casing
Tubing
Line Pipe
Drive Pipe

The Record *of* Byers Drill Pipe

In the Houston district one operator, using Byers drill pipe for the first time, has used one string of it for drilling fourteen wells, each from 2500 to 3000 feet deep, without a single failure so far. From every part of the oil and gas fields similar records are scored with

BYERS GENUINE WROUGHT IRON PIPE

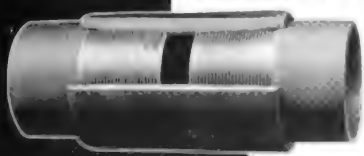
FULL WEIGHT GUARANTEED

The reason lies, first, in the nature of the iron used in all Byers tubular goods. This iron is produced under Byers control from ore mines to the finished product, and is hand puddled and rolled into skelp without the addition of scrap of any kind.

The resulting iron is tough and fibrous, the fibre giving to the pipe its wonderful resistance to vibratory and torsional stresses which so quickly cause crystallization and fracture of other pipe.

Secondly, the Byers practice of finishing the pipe insures welds which are as strong as the metal itself, and joints especially designed to withstand the severest physical stresses.

Where corrosion is a factor, as with casing, line pipe and tubing, Byers pipe possesses all the advantages which have made the old time iron famous for its rust resistance.



A. M. BYERS COMPANY

ESTABLISHED 1864

PITTSBURGH, PA.

NEW YORK CHICAGO BOSTON

LOS ANGELES HOUSTON

Some May Petroleum Incorporations.

There was no cessation in May in the organization of companies to engage in various branches of the petroleum industry, Wyoming figuring prominently in the incorporations. Following are some of the charters granted specifying $1,000,000 capital and upward:

Knickerbocker Wyoming Oil Co., Wyoming, $10,000,000. Petroleum Corp., Philadelphia, $5,000,000. Interstate Oil & Refining Co., Philadelphia, $3,000,000. Consolidated Oil & Development Co., Vancouver, B. C., $1,000,000. United Wyoming Oil Co., Dover, Del., increase to $50,000,000. Gasoline Oil Refining Co., $2,500.000; Tar Island Producing & Refining Corp., $2,000,000; D'Arbonee Lumber & Oil Co., $1,000,000; Kansas City Process Oil & Refining Co., $1,000,000; Oil & Gas Utilities Co., $2,500,000; Oklahoma Queen Oil Co., $1,000,000; Sinclair Panama Oil Corp., $5,000,000; Universal Pipe Line, Oil & Producing Co., $5,000,000; Warner-Caldwell Oil Co., $1,000,000; Lost City Oil & Gas Corp., $1,500,000; Waterloo Refining Co., $1,000,000; Texas National Oil Co., $1,000,000; North American Oil Corp., $12,500,000; Rucker Oil Production Co., $4,000,000; Henry Clay Oil Co., $2,000,000, all of Wilmington. Great Western Oil & Chemical Co., Oklahoma City, Okla., $2,000,000. Empire State Gas & Petroleum Co., South Dakota, $1,000,000. Lookout Oil & Gas Co., Wilmington, $1,000,000. American-Canadian Oil & Gas Co., New York, $1,000,000. Crystal Oil Co., New York, $1,000,000. Midland Oil, Gas & Refining Co., Chicago, $1,000,000.

Sixty-eight companies, having an authorized capital of $70,380,000 were organized during the month of May. Only two months since the war began abroad have surpassed this amount of capital stock of companies organized. The public is pretty deep in oil stocks and the inevitable is bound to occur, because there are only a few substantial companies.

The Ohio Cities Gas Co. have taken over the Pure Oil Co. on a basis of $24.50 per share.

The Pure Oil was propigated in Pennsylvania in the early 90s and all of the original "prominents" have passed away with the exception of E. H. Jennings. The company owns a refinery at Marcus Hook, Pa., pipe line in Ohio and producing territory in Ohio, West Virginia and Pennsylvania. They also own the Pure Oil Pipe Line Co., The Pure Oil Steamship Co., and control of the Producers and refiners Pipe Line Co., and the Pure Oil Producing Co. $4,535,245 common stock and $169,000 preferred stock outstanding.

The Ohio Cities Gas Co.'s balance sheet shows total assets and liabilities of $71,320,360 as compared with $21,112,316 a year ago. It is the intention to increase their capital stock to $100,000,000.

A conservative is a man who is too cowardly to fight, and too fat to run.

Life—the interval between the time your teeth are almost through and you are almost through with your teeth.

The things that should not be told are the things we most want to hear.

EPIGRAMS OF INTEREST.

Running up the white flag is like suicide; if the thing is done, you do it yourself. My 'o how many suicides are being committed these days—metaphorically speaking.

One good thing, even if gasoline is not exactly the odor of roses, it does not breed flies.

An optimist is a man who when he falls into the soup thinks of himself as being in the swim.

Those who go beneath the surface of the sea d oso at their own peril; German submarines will please take notice.—*Edison.*

Discontent is the first false step in the progress of a man or a nation.

Some people mistake independence for a chip on the shoulder.

The only man who should not advertise is the one who has nothing to offer the world in the way of service or commodity.

To get into the best society nowadays one has either to feed people, amuse people or shock people. The first named, however, has the call.

Experience is the name every one gives his mistakes.

Many good men are good merely from lack of opportunity or an overplus of caution.

Not all respectable people are good; and there are many good people who (in the eyes of the world) are not respectable.

When you drink a man's health (if repeated too often) you are apt to ruin your own.

Don't waste time regretting time that has been wasted; get busy at once and make up for lost time.

The rising generation is taking great interest in aviation; it's the life while it lasts.

India and China have neither corporations nor trusts; instead, they have appalling poverty.

It used to be that a dog ran under the wagon of his owner. But things have changed now, and the family pup sits proudly beside his mistress while she drives her Winton.

Big business has given to the world the things it needed, at a cheaper price; and all the time it has lubricated the service and bettered the quality, oil, steel, electrical appliances, woven fabrics, lamps, transportation. There is absolutely no dispute on this point that quality has been certainly improved and prices lowered. These things have been possible through the decrease of overhead charges and a taking up of economic slack and elimination of lost motion. Now then put the food supply in the hands of a competent committee so that equal distribution and prices to all may follow.

Let the reformer reform himself and the country will be safe; usually you scratch one of the breed deep enough and lo and behold you develop a hypocrite.

Professional Advice to Business Men: The most precious possession in life is good health. Eat moderately, breathe deeply, exercise out of doors, get eight hours sleep, do not worry over the war and advertise in the Oil and Gas Man's Magazine for results.

Wisdom is better than weapons of war; but one sinner destroyeth much good. Ecclesiastes ix:18—Referred to Bill Kaiser.

MARMON CARRIAGES CO.

Manufacturers of Marmon Carriages, Marmon Wagons, Marmon Hearses, Marmon Ambulances, Marmon Hack Bodies, Marmon Hack Cabs, Marmon Delivery Wagons, Marmon Express Wagons, Marmon Trucks, Marmon Gasoline Engines, Marmon Stationary Engines, Marmon Pumping Engines, Marmon Boat Engines, Marmon Boats, Marmon Bicycles, Marmon Tricycles, Marmon Tandems, Marmon Boy's Bicycles, Marmon Ladies' Bicycles, Marmon Bicycle Sundries, Marmon Bicycle Repairs, Marmon Bicycle Supplies, Marmon Bicycle Tires, Marmon Bicycle Lamps, Marmon Bicycle Bells, Marmon Bicycle Locks, Marmon Bicycle Saddles, Marmon Bicycle Pedals, Marmon Bicycle Cyclometers

THE U. S. AND OIL

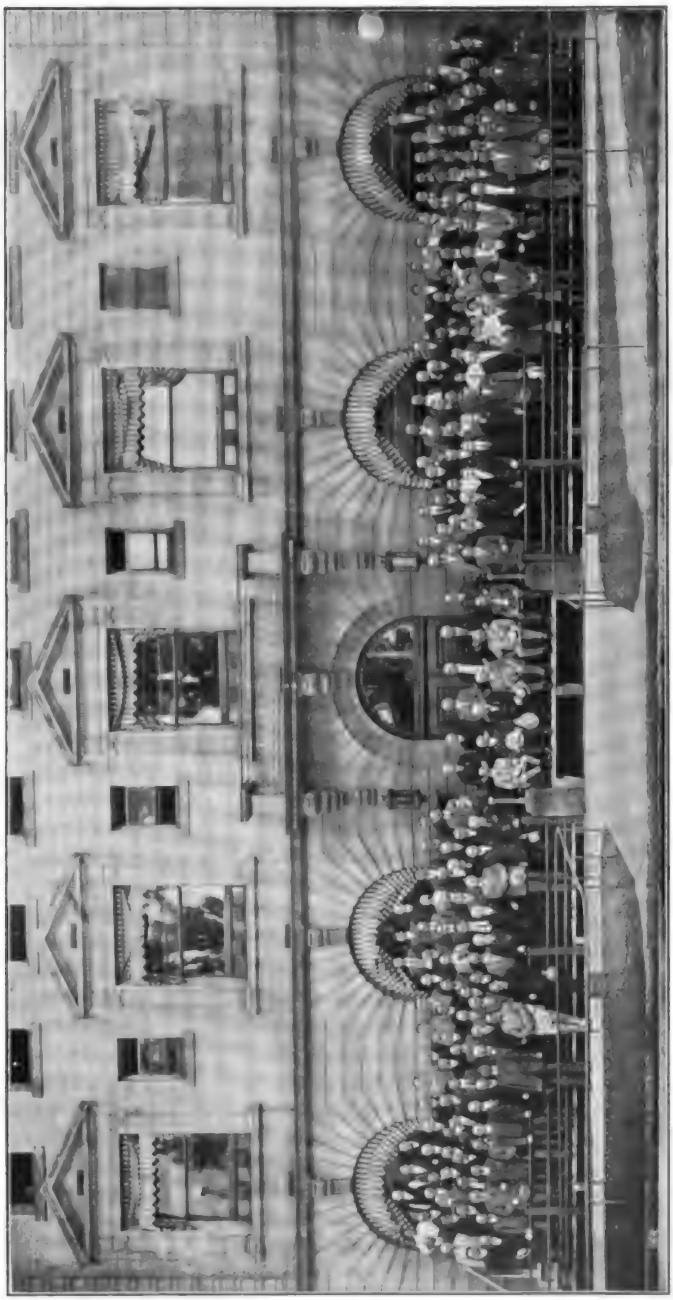
The United States government is said to be ready to place an order for 50,000,000 barrels of crude oil (fuel) for the use of its navy and will probably require about 20,000,000 of the higher grade output. It is said the order for the fuel will be placed immediately and the price will be fixed by the Trade Commission.

Secretary Daniels is quoted as ready to cause to be commandeered the oil supply of the country for war purposes, the price to be fixed by the Government Commission.

We cannot see that this will be necessary from the present outlook as the supply of oil is now and will be for the next year far in excess of any demand that may be made upon it by the war.

Ancient Greek Theatre, Taormina, Sicilia

Ancient Greek Theatre, Taormina, Sicilia



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J. W. McKEE, President
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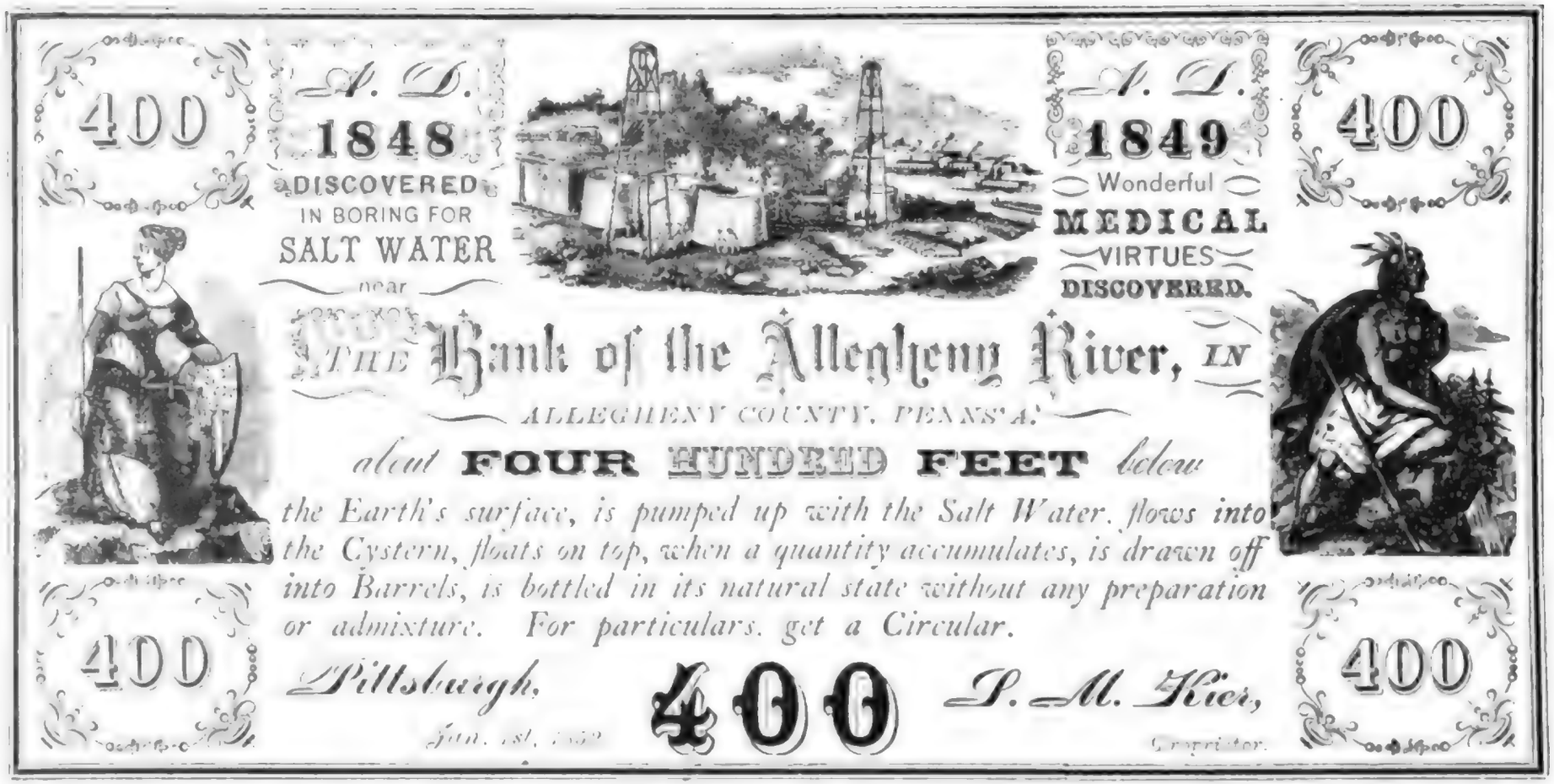

The above is as near a correct copy of the label referred to on the opposite page as we are able to give. The original was so badly worn and torn, as to render it impossible to be copied exactly.

Facsimile of a Label used by Kier in advertising Rock Oil, obtained in Drilling Salt Water Wells near Tarentum. Petroleum was sold under the names of Mustang Salve and Seneca Oil. It was a cure-all for everything.

The Pennsylvania Oil & Mining Co. of Butler, Penna.

Organized Company to Drill for Oil in Oklahoma. Story of how the Members Missed Being Millionaires. Interesting Reminiscenses.

THE development of the Mid-Continent oil fields have been full of romantic interest and incidents. Where once there was a desert waste with a few Indian villages now stand substantial cities and towns enjoying all the conveniences of modern life, their inhabitants possessing wealth undreamed of by the early squatter and aborigine. Indians who, before the advent of oil, wore blankets and lived in huts and tents, now wear tailored suits, and their wives and daughters clothe themselves in silks and diamonds and go shopping in limousines. In the past three years over $5,000,000 have been paid to the Indians in royalties alone.

In 1904 Oklahoma and Kansas produced 5,000,000 barrels of petroleum, of which the latter state was credited with four-fifths of the amount. The estimate placed on the output for the present year of 1917 is 125,000,000 barrels. This is considered a very conservative amount and may exceed these figures very largely, as Kansas is coming to the front with many large wells.

Without this great field our Government and its allies would be at a tremendous disadvantage in the prosecution of the war, especially when it is understood that Germany is in full possession of the Galician and Rumanian oil fields and is evidently getting an ample supply of oil to meet their demands.

Fortunately, however, Providence has so arranged matters that the great Mid-Continent reservoirs, though known to exist for years, have been conserved for the great work now required of them. If active development of these great oil fields had commenced with the completion of the well in 1873, referred to elsewhere in this article, the oil would have been wasted and the fields exhausted.

The early development of the oil pools in Indian Territory, now Oklahoma, have been the subject for many pretty pieces of fiction. Some extraordinary and extravagant tales have been written about them which, while pleasing in fancy, have no real foundation in fact, evidently originating in the dome of the writer.

Some time ago a copy of a Tulsa, Oklahoma, paper (an issue of two years ago) accidently fell into the hands of the writer. It contained a very interesting account of the securing of a lease from the Indians in the early nineties. We became interested, as a number of representative men from Butler, Pa., were mentioned as being members of the com-

pany. This led to an investigation, which developed the fact that all the legal papers referring to the lease and drilling of the well were still in existence and in possession of Dr. M. E. Headland, the secretary of the erstwhile company.

As it would happen, John S. Wick, the veteran oil man, of Sapulpa, Oklahoma, who is entitled to the honor of having drilled the first well in what was then the Indian Territory, dropped into our sanctum, enabling us to present in this article a full and complete statement gathered from Wick, the members of the Pennsylvania Oil and Mining Co., and all the legal documents pertaining to the affair that have not seen the light of day for over twenty years until now.

As a text for what is to follow we give space to the newspaper article referred to above :

INDIAN SOLD FIRST OIL LAND FOR DRINK

Ten Gallons of Whiskey Purchased the First Oil Lease in the Great Oklahoma Field.

Hatred of "Booze" Caused Abandonment

Lease Was Not Verified by Interior Department, and Jumpers Got Land. Fourth Well Would Have Tapped the Glenn Pool.

Whiskey bought the first lease on oil lands in what is now the state of Oklahoma, and a hatred of all intoxicants caused the loss of this lease by the men who purchased it so cheaply, according to a statement of the transaction as made by W. F. Braun, one time a resident of Pittsburgh, Pa., and now a resident of Tulsa, who was one of the men who contracted for the first lease of land from the Indians. The story of how it was obtained, and how it was lost, is almost as strange as the tale of Alladin and his lamp.

This lease was secured from the Creek tribe in 1893, and consisted of 644,000 acres of land in the vicinity of the famous Glenn Pool district. A part of the Glenn pool was in the tract, and if the men who had the lease had retained possession of the land and drilled the fourth well, as intended, they would have tapped the Glenn pool itself. The site of the fourth well, as planned by them, was in the pool, and the place already had been marked when they abandoned the project.

Shipped From Pittsburgh.

The consideration for which the Creek nation released the land to the white men was a 10-gallon shipment of whiskey from Pittsburgh. Just how the whiskey made its way into the midst of the Indians always has been more or less a mystery, and the exact method employed is still shrouded by mystery to a certain extent. It is stated, however, that the whiskey was shipped from Pittsburgh by W. F. Braun, and that when it arrived at the station in the west it was loaded on the backs of ponies and carried over a circuitous route to the Indians. Different stories about it vary, and none of them can be verified, but certain it is that the penalty for distributing intoxicants among the Indians was a heavy one and the United States marshals in the Indian Territory were not gentle with the men they caught. The few white settlers living in the territory at the time were liable to be still more harsh, as the fire-water was considered a dangerous things in the hands of the red men.

Stories credited most were that the

liquor was packed in a way that made it appear like any ordinary merchandise or food supplies and was strapped on the backs of the ponies. These were led over devious trails during the night to the territory occupied by the Indians. Several times on the trip the men in charge of the whiskey shipment narrowly escaped detection by the marshals, but at last they arrived safely, and the exchange of fire-water for oil lands was consummated. Another page in the history of the red man's great love for alcoholics was written.

The land was leased to the incorporators of the town of Sapulpa, Okla., who had their pictures made in a group after the first well was sunk and oil was discovered. The incorporators then subleased the land to John Wick, now of Sapulpa, and formerly of Butler, Pa., the center of the Pennsylvania oil fields.

Company Drilled Wells.

John Wick, in conjunction with his brother, L. C. Wick, organized a company to drill the wells. This company was composed of Amos Steelsmith, of Butler, Pa.; James Patterson, of Jamestown, N. Y., an uncle of the Bailey brothers of Tulsa; Jesse and William Heydrick, of Butler, Pa.; William Long, recently of Tulsa, and editor of a paper at Cleveland, Okla., at the present time; Pat Golden, of Butler, Pa., and W. F. Braun, of Pittsburgh, and later of Tulsa.

This company drilled the first three wells in Oklahoma oil fields, the first well being in the Creek nation on the banks of the creek at what is now Red Fork, Okla. The second well was sunk about three and a half miles west of the Red Fork well in what is now called the Orchard Farm, while the third well was near the Glenn Pool.

The contractor for the first well was Sam Weaver, who moved his drilling tools here from Bowling Green, Ohio, these tools being partially owned by Amos Steelsmith. The men who drilled the second and third wells cannot be recalled by any of the men interested in them, but there were not attended by as much excitement as was the drilling of the first hole.

W. F. Braun gave a check for $1,000 to John Wick to place in the hands of Sam Weaver as soon as the contractor's tools arrived at Red Fork. This was done, and drilling operations began immediately. The field work connected with the first well was looked after by Jesse Heydrick, who gathered a crew of men, some of whom were familiar with the work, while others were gaining their first experience.

Struck Oil at 1712 Feet.

Oil was struck at a depth of 1712 feet in the first well, and filled up about 1400 feet. As the hole was sunk deeper and deeper and prospects for oil grew better, every precaution was taken by the owners of the lease to prevent others from getting the news of the find to the stock market ahead of them. Oil at that time was sold on the market in the stock exchange at New York and at other points, and the first news of the location of the product in Oklahoma was expected to have considerable effect on the market.

A few days before the flow was released by the drillers, the telegraph wires to all points in the north were cut. In order to get the news to the outside world W. F. Braun mounted a pony and rode to Muskogee and from there flashed the first message of the discovery of oil in Oklahoma to New York. A large number of prominent oil men in all parts of the country were watching the Oklahoma

development intently, and as soon as the news was wired to New York, it spread to all oil centers, bringing oil men here to investigate conditions.

Reports of Failure.

Either the investigations were not thorough enough, or the experts were not thoroughly familiar with conditions in the territory, because the first reports sent back by them were to the effect that the country was no good as an oil country. These misleading reports continued to go in after the second and third holes were drilled, and while oil was found in all of these wells, the rumor was persistent in the east that Oklahoma was a failure for oil and gas in commercial quantities.

The first drilling contract was offered W. W. Lance, a nephew of Amos Steelsmith, who was then engaged in the Pennsylvania and West Virginia fields, and who is a resident at 612 South Boulder avenue, Tulsa, at the present time. Mr. Lance was too busy to come to this country at the time the first well was drilled, but came out a short time later. He was employed by Steelsmith, Braun & Patterson at the time.

By the terms of the first lease, the promoters were to pay $30 per year rent and two years' rent actually was paid. The promoters were to drill at least one well each year, each well to hold lease on 640 acres of land.

Lease Not Approved.

This lease was not approved by the Department of the Interior, as much doubt was entertained at the time as to whether or not this was necessary. Later it proved to be a very necessary step, and in this connection Mr. Braun relates an interesting story as to the manner in which the first lease came to be abandoned.

The owners of the lease could have had it approved as the Foster lease is located in the Osage country, and the first lease held by Steelsmith, Braun and others is on file in the federal building at Muskogee at the present time and may be inspected by all who desire to seek it.

"While love of whiskey obtained the lease for us," stated Mr. Braun, "it was hatred of the fiery stuff that caused the lease to be abandoned. It is a well-known fact that at that time Amos Steelsmith was a candidate for Congress from Pennsylvania. He was the rankest prohibitionist in his state at the time and was a candidate on the Prohibition platform. He fought for prohibition as bitterly as it is possible for a man to fight, and his sincerity was admired and respected by all of us.

Booze Lost Lease.

"At a conference at Butler, Pa., when he first learned that the first lease, as well as the sub-leases that followed, were obtained through the influence of "booze" he refused flatly to have anything further to do with the proposition. He was one of the leading spirits in his party at the time, as well as being a leader in the development of the Oklahoma oil fields, and, through the help of his partners, the original lease was abandoned deliberately.

"Guffey and Gailey were the first to jump the lease at Red Fork, and the development of that country continued until it has reached its present proportions. Amos Steelsmith died a short time ago at Electric, Texas, being killed while watching operations at an oil field."

According to the account of the lease given by Mr. Braun, the active spirits in organizing the forces and raising the capital to promote the drilling of the first wells were Jesse and William Heydrick, John Wick and W. F. Braun.

Whiskey Was Only Means.

"People who are not familiar with the conditions that existed in this country at the time may regard the deal to obtain the lease as something shady, but it was the only way we could get the land. We tried to get the property from the Indians by fair trading methods, but they would consider nothing other than whiskey. The matter was deliberated over for many days, and the Indians were called into many conferences, but they would only shake their heads when any other propositions were mentioned.

"The first lease was located only a short distance from Tulsa. It all lay within the confines of the territory controlled by the Creek nation."

On the ground covered by the terms of the first lease a forest of derricks has sprung up in the past few years, and many wells are still yielding their wealth of the crude product. The passenger between Tulsa and Sapulpa may look on either side of the tracks and see these wells all about him, and a journey to the south and east of Sapulpa, in the vicinity of Jenks, Okla., will take him to the center of the Glenn Pool, where millions of dollars have been taken from the ground and where millions more probably will be brought to the surface in the shape of the crude oil flow.

Ten gallons of whiskey made this great development possible.

The members of the Pennsylvania Oil & Mining Co., which the above article is supposed to refer to, when interrogated were much surprised to learn that whiskey had played any part in the securing of the lease as stated. Mr. Wick, who took the lease and should know more about the circumstances connected with it that any one else, avers that no whiskey was used in the transaction, as it would have been a very dangerous experiment to smuggle whiskey to the Indians at that time.

The original lease that the writer holds in his hands contains the following:

Agreement, Made and entered into this first day of October, 1895, by and between Adams, Sapulpa & Mining Company, of the Okmulgee district, and of the Indian Territory, party of the first part, and Pennsylvania Oil & Mining Co., party of the second part. The Pennsylvania Oil & Mining Co. is given the right to operate for petroleum, gas and all other minerals, except gold or silver, on lands located in the Okmulgee district, Indian Territory. Bounded on the North by lands of Oklahoma Territory and Arkansas river; on the East by lands of the Frisco R. R.; on the South by same, and West by lands of Oklahoma Territory, containing *twenty-five miles square.* The lease calls for a term of ten years or as long as oil, gas or any of the minerals can be produced in paying quantities.

The consideration was to be six cents per barrel of 50 gallons on oil produced, and $50 per annum for the gas when utilized. The royalty on coal was placed at ten per cent, and the same on the value of minerals. There are other minor agreements included that are not necessary to mention here.

The lease was signed by Thomas I. Adams, President; James Sapulpa, Vice President; Wm. A. Sapulpa, Secretary; Wash Adams, Treasurer; Lewis Adams, Secretary of Treasurer and Pennsylvania Oil & Mining Co., by John S. Wick, Attorney. The paper was acknowledged before Thomas J. Tarpley, a Notary Public, in the First Judicial District of Indian Territory.

The story of how the Pennsylvania Oil & Mining Co. came to be organized,

and the way in which the lease, comprising 640,000 acres in Indian Territory, was secured, is a part of the exemplified and romantic sketch of the life of John S. Wick, which is briefly given herewith:

Mr. Wick as a young man followed the fortunes of the oil business, then in its infancy, along the Creek and the Allegheny river in Pennsylvania, and may be classed as a pioneer of those days. In the latter sixties, owing to an over-plus of oil, the price dropped and things began to slow up. Mr. Wick then listened to the "Call of the Wild" and determined to seek the "Wild and Wooly." Leaving Parkers Landing in the spring of 1869, with a brief sojourn in the cities of Pittsburgh and Chicago, he landed at Fort Smith, Arkansas. From there he proceeded to Fort Gibson, where he entered the employment of the United States government, joining a corps of surveyors bound for Arizona. He spent over four years in this work and assisted in laying out 40 acre lots in Oklahoma. About this time Mr. Wick observed the surface indications in Indian Territory as being very favorable for oil, and from thence on his whole mind was directed towards getting capital interested and a well drilled.

Running across Marcus Hulings, a well known oil man of Oil City, Pa., the subject of oil was discussed, and Mr. Hulings, who was said to be a spiritualist, related a vision that he had had touching a big oil field that would be found in Indian Territory. Wick immediately jumped up and said, "I know where this exact spot is," and described it to the satisfaction of Hulings. It was then agreed to drill a well which, after long preparation, was accomplished in 1873. The well encountered oil at a depth of 1250 feet; as casing was unknown then, seed bags were used. Mr. Wick states if the well had been drilled in this day it would have been good for 2,000 barrels. The oil from the well ran down into the river and caught fire. This aroused the ire of the cowmen, who were the dominating power then, and the well had to be plugged to save trouble. Other difficulties arose which compelled the abandonment of the enterprise.

In the early nineties Mr. Wick became ill, being affected with rheumatism, due to his exposure incident to the strenuous life that he had followed. He went to Mt. Clemens, Michigan, where he received much benefit. He then came to Butler, Pa., where he has a number of relatives residing. He entered the lumber business at Harmony, Pa., which occupied his time until 1895, when the old spirit of restlessness seized him and he prepared to go back to the plains. In the meantime he had preached the great possibilities of Indian country for oil to his brother, L. C. Wick, a prominent business man of Butler. The latter in turn took the matter up with his neighbor, Dr. M. E. Headland, who in turn succeeded in getting others interested, and a meeting was called to form an organization. The first meeting was held July 22nd, 1895, and the following officers were elected: Otto Limberg, President; M. E. Headland, Secretary, and D. L. Aiken, Treasurer. The name Pennsylvania Oil & Mining Co. was selected.

At the meeting $700.00 was subscribed to send John S. Wick, armed with a power of attorney to act for the company, to take up a lease. This was done and Wick reported back to the company as follows: "I have the honor to submit to you the following report in regard to leasing lands in the Indian territory: I proceeded to the aforesaid territory and succeeding in leasing twenty-five miles square in the Creek Nation (here the sur-

rounding boundaries are given), said leases being taken in the name of the Pennsylvania Oil & Mining Co." Here follows the consideration, with signatures and acknowledgement noted elsewhere.

With the lease in their possession, discussion arose as to what part the Government would play in the transaction, so Thomas Robinson, Esq., a Butler attorney, was employed to go to Washington and take the matter up with the Secretary of the Interior. This trip was fruitless and nothing came of it.

As the lease called for commencement of operations within twelve months from date of lease, something had to be done or the lease would become null and void. About this time Amos Steelsmith came on the scene. This well-known oil man had risen meteoric-like in the oleaginous world and was always ready to take a chance, so he agreed to drill a well, carrying the company a one-fourth interest free for the consideration of a transfer to him of 200,000 acres of the northern part of the lease.

Subsequently the well was drilled to a depth of 550 feet, near Red Fork, Indian Territory, about four miles from the now beautiful city of Tulsa. The well showed some oil, but not in sufficient quantities to arouse much interest. This was the first well drilled at this period, and the only one that the Pennsylvania Oil & Mining Company were connected with.

Mr. Wick afterwards came back to Butler and got Jesse A. Heydrick, the veteran civil engineer, geologist and mapmaker, interested. Mr. Heydrick accompanied Wick out there and was quick to realize what has since became a fact, the great possibilities for oil and gas. On this trip several thousand acres were leased from the Indians, and two wells were drilled with Butler capital. One can stand today where these wells were drilled and look out upon hundreds of wells that have made many millionaires. If the Government had placed its O. K. upon the Heydrick leases, all interested would have made millions.

While out with the Indians, Mr. Wick tells an amusing story about Heydrick. The latter had in some way gotten the idea that the Creek Indians were snake-eaters, and Wick decided to carry the joke out. He caught a big eel and had it prepared to a turn and served it up to his guest. Heydrick jumped up with horror and could not be induced to come to the table for that meal, even after he had been assured that it was an eel.

Mr. Wick makes the statement that the man engaged in drilling the first well did not play square, having been influenced by men who did not care to see oil struck there at that particular time and so the well was tampered with. In speaking of the leases he took from the Indians he is positive no whiskey was used as an inducement, the consideration was, however, small, the Indians being satisfied to get the lands tested.

Mr. Wick, while in the evening of life, is possessed of a rugged constitution, with unimpaired health, and bids fair to live to a good old age. He is of modest deportment and rather reticent in manner; not prone to extravagant boasting. He has thorough knowledge of the Red Men, through having been among them for so many years, and relates some interesting stories of the days before oil, with its civilizing influences, brought the changes that now prevail. He says he is in the oil game now on the last lap as it were. He is interested in five companies and has leases covering 28,000 acres located on the 96th meridian in Southern Oklahoma.

This land all belongs to the Indians and was secured from them through his

enjoying their confidence and being able to speak their tongue. He says the Indians are the truest people in the world, a little lazy, but firmly honest. The oil has placed them on "Easy street," and they count their money by the thousands, some of them being in the millionaire class.

At the time Mr. Wick first struck the country buffalo were very plentiful, also panthers and bears. They have all disappeared. Rattlesnakes, however, abound in great numbers. The diamond rattler is remarkably large, being seven and eight feet long and when stood up will hold two bushels of bran. Copperheads also are numerous, as well as a snake they call the Cotton Mouth, from the fact of its mouth being white. These live along the rivers and are very poisonous. Mr. Wick says as an antidote for a snake bite common soda is most effective.

One good point he makes in favor of his Western country is that they are not so eager after the almighty dollar as they are in the East, and are fond of amusement and sport. They will not try to do you out of anything, a trait which the Easterner is an adept at. If any one "beats" another one in a deal, there is apt to be trouble, and possibly a hanging bee. The Indians are especially friendly and hold friendships sacred, and it is not safe to carry tales to them concerning a friend of theirs. The one doing so is likely to meet with rough treatment, with the remark, "That is my friend."

Mr. Wick states there are no blanket Indians among the Creeks now, although they were all of that kind when he first went out there. Many of them now live in houses costing from $5,000 to $10,000, and they keep them neatly, too. The Indian maid has become very attractive to the young Eastern chap, since wealth is hers, and many marriages are resulting. Some of these girls compare very favorably with their fairer sisters at that.

Mr. Wick attended many of the Indian pow-wows in the early days, and has witnessed some interesting rites and ceremonies. Bringing rain to quench the parched earth and save their crops is one of their most peculiar rites and ceremonies. The medicine men keep a large number of turtles, some of them of very great age. At the appointed time these turtles are brought out and beaten across the back, at the same time incantations are uttered for the purpose of raising spirits or performing magical results. The harder they beat the turtles, the greater is supposed to be the rainfall. Mr. Wick says he has actually seen it rain hard after one of the meetings.

In speaking of the trend of the oil-bearing sand, Mr. Wick says that the oil follows the north and south line right along the 96th meridian. Some times close places in the sand are found, and the well is no good. Often they strike a great pressure of water which pushes the oil back, and the well has to be abandoned; there is no use trying to exhaust the water; it can not be done. The pay sand is usually found at a depth of about 1750 feet.

Regarding the liquor question in Oklahoma, Mr. Wick has this to say: "There is considerable drinking; many of them are prohibitionists in sentiment only, and take their little drink on the side. Recently a Prohibition editor got to spreading it on too thick, with the result that his place was raided and wrecked and himself badly used up. Moonshiners exist, and they make a drink called "white mule;" its name is suggestive of its kick, and results come quickly. The Indians make a beverage out of barley, hops and yeast they call "choc." It is very intoxicating and is good for a long-standing

drunk, giving an effect like champagne.

All the papers relating to the organization of the Pennsylvania Oil & Mining Co. are in the possession of Dr. M. E. Headland. There is the lease, the paper containing the subscribers to the fund to send John S. Wick to secure the lease, the agreement whereby Amos Steelsmith received a sub-lease of 200,000 acres in consideration of carrying the said company a one-fourth interest, a number of letters from Thomas I. Adams, the Indian judge, who is now deceased, all of which goes to make up an interesting chapter of what might have been if the Butler fellows had followed up their first endeavors and at least have kept their leases alive.

GUM TREE—Supposed to have been caused to grow in this freakish way by an Indian who had intended it for a bow. Jesse A. Heydrick, veteran surveyor, map maker and oil operator, is shown in the picture.

Producing, Refining and Cracking of Petroleum

Methods of Up-to-Date Refiners--The Process of Distillation Importance of Petroleum Products--An Accidental Discovery--Vaporizing of Oil Outside the Cracking Zone.

By Dr. Walter F. Rittman, Inventor of the Rittman Process.

THE beginnings of the oil refining industry go back to the eighteenth century, and perhaps earlier. It is definitely known that refineries were operated in the Baku district of Russia in the early part of the nineteenth century. The industry in this country may be said to date from the small scale distillation of several barrels of crude petroleum by a Pittsburgh druggist named Kier in 1885. The real father of the industry, however, was Prof. Benjamin Sillman, of Yale University, who made the first comprehensive examination of American petroleum, and who first pointed out the possibilities inherent in fractional distillation of such crude material. His remarkable report has become one of the classics of the petroleum industry.

At the time of the drilling of the Drake well in the vicinity of Titusville, Pa., in 1859, which started the oil producing industry in this country, there were approximately fifty refineries, so-called, in the United States, built and operated for the production of burning oil from coal distillation. These refineries had sprung into being as the result of the discovery of James Young in 1847 that a burning oil of satisfactory illuminating quality might be obtained from the distillation of coal or related material. This discovery by Young started the Scottish shale industry, and the industry spread to this country. The discovery of Prof. Sillman, Jr., that a burning oil of superior quality to the coal oil then on the market could be obtained from Pennsylvania crude petroleum, revolutionized this growing coal-oil business. The result was that numbers of the coal-oil refineries were either forced out of business or were converted over into refineries for the handling of Pennsylvania rock oil.

From a small beginning, handling 2,000 barrels a year, the industry has grown and expanded until today several hundred million barrels of crude petroleum are handled yearly, and investments aggregating over a billion dollars have been made for the refining and distributing of petroleum and its products. Individual refineries have developed capacities up to nearly 100,000 barrels a day, as compared with a few hundred barrels sixty years ago. Transportation devices have been developed until today there is hardly a city or town in the United States where petroleum products are not sold. Marketing has also been

carried into the far corners of the world. In the competition for the world's trade the United States has in the past outdistanced its competitors, but it is a question whether it can continue to do so in the future, owing to the aggressive way in which foreign capital has become invested in the industry in this country, and owing to the restrictions placed by law upon the co-operation and combination of marketing companies, which restrictions do not apply to the competitors of the American companies in the keen competition for the domination of world markets.

Industry in the Second Epoch.

The refining industry today is in the midst of what may be termed its second epoch. The first may be termed that of "illumination." The second, that of "motive power and lubrication." The early industry was chiefly concerned with the production of products suitable for illumination. Chief among these were burning (illuminating) oils or kerosenes. Other products were for gaseous illumination in one of three forms, i. e., enrichment of air gas, manufacture of oil gas, or enrichment of coal gas. The gasolene of today had then only a limited market and was a waste product in many cases.

Owing to the great development of machinery of all kinds, and in particular the great increase in output of low-price motor vehicles, the present-day industry is characterized by tremendous demand for fuel, for power generation and lubricants for the lubrication of moving parts.

The part played by petroleum in the great war now being waged in the way of propulsion of transport trains, aeroplanes and submarines, moving machines that traverse earth, sea and sky, have served to bring home to all of us a greatly increased realization of the importance of the petroleum industry in our economic and social life, and, in particular, that part of such industry concerned with the refining of crude petroleum into innumerable finished products. Even before the war public interest in all that relates to petroleum had been increasingly evidenced.

Undoubtedly the fortunes made and lost in the search for oil, and the picturesque features attending its production and transportation have much to do with the popular interest. The low-priced automobile has also contributed. On the economic side, however, such interest is due in large part to the fact that there is a growing appreciation that bountiful as are our present supplies of this material, our resources are not inexhaustible. It is coming to be recognized that the present insatiable demand for the products of petroleum makes it a matter of only a relatively few years before the present supplies will be exhausted. The dependence of our modern industrial world upon petroleum products makes it fitting that any discussion of the refining industry should contain a foreword, calling attention to this fact —a fact which is apt to be entirely ignored when considering a business of such magnitude as the present-day petroleum refining industry, which encompasses the earth with its products.

Viewed in this light the question of what use is made of the products of petroleum becomes an all-important consideration. It is neither more nor less than an economic crime to permit the use of petroleum products as fuel, where such other fuel such as coal could be utilized with efficiency. Particularly when such other fuel occurs in greater abundance, is equally available, and does

not have the same useful properties as petroleum in other directions. This remark applies to the great increases in the use of fuel oil which has been witnessed since 1898, and particularly in the past few years. The industries of the world have come to be dependent upon petroleum lubricants as a means of decreasing the friction of moving parts, and of permitting the operation of high-speed machinery.

If petroleum lubricants were removed from the market, the wheels of industry would largely have to remain idle until substitutes were found. This being the case, it should be regarded as an economic crime to use under boilers oils valued for their lubricating content, which, when burned, can never be replaced. Particularly is this the case in the United States, for the reason that while the United States produces, roughly, two-thirds of the world's production of crude petroleum, it produces a higher percentage of the total output of refinable crudes.

Entire World Dependent Upon U. S.

The entire world is coming to be very largely dependent upon the United States for its supplies of many of the products of petroleum. An idea of the extent to which this obtains may be gained from an examination of export statistics. Even with some of the markets cut off by reason of the European war, our petroleum exports of all kinds during the year 1915 amounted to over two and one-half billion gallons, valued at nearly $150,000,000. It can be truly said that American petroleum lights the world, since in peace times over a billion gallons of burning oils (kerosene) are exported, the value of which amounts to over $60,000,000. The extent to which the intdustry of the world is dependent upon this country for lubricants can be realized from the fact that lubricants valued at over $32,000,000 are annually exported.

About one-sixth of our petroleum production is sold outright for fuel purposes, without undergoing any degree of refining. Two-thirds of our total production of crude petroleum is produced west of the Mississippi river. Of this amount, a very considerable percentage undergoes no refining at all, or else is incompletely refined. California, which produces approximately one-third of the total output, refines slightly in excess of 50 per cent. of her production, the balance being sold direct as fuel.

Of the mid-continent production (embracing Kansas, Oklahoma, Louisiana and Texas) constituting another third, the great bulk of the production is subjected to incomplete refining in what is known as topping or skinning plants. By this is meant that the lighter or more volatile portions of the crude petroleum (gasolene and naphtha) are distilled off, and the balance sold as fuel oil. Occasionally, when market conditions warrant, a gas oil is also distilled, and the residue then marketed as fuel oil.

Comparatively little lubricating oils are produced by the refiners west of the Mississippi river, for a variety of reasons. Among these are the comparatively limited markets for their lubricating oils, the increased investment required, and higher technical skill necessary for the combining of lubricants. Profitable local markets for fuel oil are responsible in part. It is noteworthy that one of the largest refining companies in California accounts for the greatly improved financial showing made during the past year on the ground that it had marketed quantities of lubricants not previously manufactured. This is an encouraging indication of the future.

Generally speaking, the Atlantic seaboard refiners (including some plants on the Gulf of Mexico) and those located in the Central West and Eastern parts of the United States are the only ones that completely refine the crude, and endeavor to extract the greatest variety of products therefrom. Undoubtedly, as the temporary nature of our petroleum resources is appreciated, public demand will be more and more insistent that greater and greater quantities of refinable crudes, such as are produced in the mid-continent field, be completely processed in the refinery.

Consumption Exceeding Production.

When it is considered that out of a total production in 1915 in excess of 280,000,000 barrels of crude petroleum, less than ten per centum, or 24,000,000 barrels, were placed in storage, which storage is little more than one month's supply for the refining industry, it can be appreciated what the tremendous expansion of the refining industry, and the tremendous increase in consumption and utilization mean with respect to the future. In other words, consumption is taking place faster than the ability to produce. Today we are producing 300,000,000 barrels and are consuming 335,000,000 barrels, according to the chairman of the Petroleum Committee of the Council of National Defense. The only possible outcome is that some of the least efficient uses for petroleum must go unsatisfied while more economical demands are filled.

In this connection, attention may be called to the recent estimate of the United States Geological Survey submitted to Congress through the Secretary of the Interior, in which, taking into account all known deposits of petroleum, both developed and undeveloped, it was estimated that the petroleum resources of the United States were about one-third exhausted.

The estimated percentage of exhaustion ranged from 93 per cent. in the Lima, Ohio-Indiana, field, and 70 per cent. in Pennsylvania fields, down to 2 per cent. in the Wyoming-Montana field. At first blush, the fact that two-thirds of our estimated petroleum supplies are still in the ground might be considered as ample security for the future. Such considerations, however, fail to take into account the vastly increased rate of production of the present as compared with the past, also the fact that less than 50 per cent. of the oil in the grounds is normally recovered. This rate of production, with its tendency to increase, means that, within a space of from thirty to fifty years, other factors remaining unchanged, we can face the probable exhaustion of our underground oil supplies.

Should Be Used More Efficiently.

Under such conditions it behooves us of the present day to insist, before it is too late, that the most efficient use be made of our petroleum supplies. Our concern should be not with increasing the amount of petroleum produced, but in increasing the range of usefulness to which the production is put. With expanding knowledge of the nature of hydrocarbons (petroleum being a complex mixture of molecules of matter termed hydrocarbons), and particularly of the possibility of changing different type hydrocarbons into others, chemists foresee almost unlimited possibilities in the way of developing new industries based upon utilization of petroleum hydrocarbons in combination with other chemical substances.

Passing such general conceptions, we

may now consider the nature of the refining process.

Refining of Crude Oil.

The refining of crude petroleum consists in the operation knows as fractional distillation. This process involves the changing of the liquid, raw material, into vapors by means of the application of heat, the condensation, or reduction to liquid form of such vapors, and the separation of condensed products according to boiling point.

A chemical conception of petroleum refining is as follows:

The chemist considers all substances to be composed of molecules, or minute particles less than one eight hundred millionth of an inch in size. Petroleum molecules belong to a class known as hydrocarbons; that is, each molecule is composed of carbon and hydrogen combined in various proportions. There are countless different hydrocarbons, but all may be classified in one or another of various series, depending on the number of carbon and hydrogen parts in the molecule. Every hydrocarbon has more carbon and more hydrogen than the hydrocarbon preceding in its series. The series ($C_n H_{2n+2}$) CH_4, C_2H_6, C_3H_8, C_4H_{10}, and so on up to $C_{35}H_{72}$, is known as the paraffin series of hydrocarbons. That hydrocarbons occur in series is an important fact for petroleum refiners, because as the amount of carbon and hydrogen increase the molecule becomes larger and its boiling point higher. Hence it is possible to separate low-boiling from high-boiling molecules by distillation, and to break large into smaller molecules by heat and pressure, or by heat alone.

The Process of Distillation.

The refining process is primarily one of distillation. As explained, the crude oil consists of a mixture of hydrocarbons of various sizes and weights and of varying boiling points. To separate these hydrocarbons it is necessary to apply heat. The liquid crude oil is placed in the still, and fire started underneath. The smaller low-boiling hydrocarbons that constitute the gasolene and naphtha portions of the oil are first vaporized and pass off from the still. The vapors pass on into a condenser, which is merely a long series of pipes arranged in a rectangular tank, where they are cooled by constantly changing water, and thence to suitable storage tanks to await further refining treatment.

As this process goes on, the low-boiling hydrocarbons are removed from the oil in the still, and those boiling next in order begin to come over. These pass through the condensing apparatus, and are collected in their turn in a different tank for future redistillation and refining. The chief products so obtained are first, gasolene, then naphthas, and, in order, kerosenes, wax distillates, and cylinder stocks. This applies to Pennsylvania grade crudes. With lower-grade crudes in lieu of wax distillates and cylinder stocks, gas oil, fuel oil, and in some instances asphaltic road oils and artificial asphaltum are derived.

These so-called crude gasolene and illuminating-oil stocks are then washed with sulphuric acid and soda lye and recharged into steam stills, the oil being agitated and heated during distillation by jets of steam at the bottom of the still. If the oils coming from the second distillation are not satisfactory in color, they must be subjected to chemical treatment or filtered through Fullers earth.

What Steam Distillation Does.

If the refiner does not wish to produce a maximum amount of gasolene and kerosene, but wishes to specialize on the

various grades of lubricating oil and paraffin wax products, he will resort to steam distillation in the first crude-oil still. The steam reduces the temperature and carries over the vapors, thus preventing the decomposition of large high-boiling hydrocarbon molecules on the hot sides of the still. The large molecules are more valuable in lubricating oil, and it is necessary to preserve them unchanged. By this steam distillation process a greater amount of products, such as signal oils, light machinery oils, sewing-machine and bicycle oils, and engine oils, as dynamo and automobile oils, is obtained; also, if the oil contains paraffin wax, it may be separated by freezing out, and worked up into the various products of commerce.

Different Methods For Treating Oil.

The special grade of products obtained depends upon the character of the crude oil and the particular method of treatment adopted by the refiner. Each crude oil has its own chemical nature that renders it suitable for a definite kind of product, and for a definite method of treatment by the refiner. Each practice varies not only with the different oils, but also with different refiners handling the same grades of oil.

Before the day of the automobile, lubricating oils were the most profitable of petroleum products; gasolene was undesirable, and as much of it as possible was included in the kerosene portion. Since 1905 the number of automobiles in use in this country has grown from 85,000 to 4,000,000, and the demand for gasolene has increased its production from 300,000,000 gallons to 3,000,000,000 gallons. There is also an increasing demand for gasolene for motor boats, motorcylces, farm engines, cleaning establishments, and aeroplanes, and it is certain that a large part of the 25,000,000 horses now used in this country will eventually be replaced by motor trucks.

This immense and inceasing demand for gasolene has absolutely changed the refining business. Formerly, the refiner wished to preserve the heavy hydrocarbon molecules for his gas and fuel oil stocks; now, his greatest problem is how to get rid of them, how to break up the heavier hydrocarbons into two or more lighter lower boiling molecules that will distil over in the gasolene portion; in other words, turn as much of the other products into gasolene as possible.

An Accidental Discovery.

Under the influence of heat and pressure it is possible to break these heavy hydrocarbons, one molecule containing perhaps thirty carbon atoms, into four or five smaller molecules of five or six atoms each. It is said to have been rediscovered at a refinery in New Jersey, where a stillman, after distilling off all the gasolene and kerosene from a charge of crude oil in his still, went off to talk politics, leaving the fire burning under the still, and upon returning several hours later, found, much to his surprise, that he could distil over an additional quantity of kerosene. It was the practice among oil men for many years to increase the yield of illuminating oil by distilling slowly and allowing the oil vapors to condense on the upper wall of the still, and the drops to fall back into the liquid over and over again. This method of distillation always has been known as "cracking," because large molecules are cracked into smaller molecules, as a road builder breaks up large stones into sizes suitable for his purposes.

A more modern way of applying the action of heat is to retain the oil in its liquid form by use of pressure. It is

well known that pressure raises the boiling point of a liquid. In other words, it requires more heat to vaporize a liquid against a higher pressure. Consequently, if a valve is arranged so that the vapors can only pass from the still and through the condenser at a high pressure, it is possible to raise the boiling point of the oil above the cracking temperature of the molecules; and to cause cracking in the liquid itself. Many different stills have been devised for this purpose, and millions of gallons of gasolene have been produced by pressure stills in actual commercial operation. However, there is a disadvantage in this method of cracking, on account of the limitation in raw materials that can be used.

It is difficult, without great danger of explosion, to crack kerosene in pressure stills, because the boiling point of these products is so low that immense pressure is required to raise it above the cracking temperature. It is just as possible, chemically, to crack these substances in a still, but practically it is impossible to make stills of a material sufficiently strong to withstand the pressure needed for a low boiling oil.

How the Oil Can Be Vaporized.

However, the oil can be vaporized outside of the cracking zone and acted upon while in gaseous form by heat and pressure. Here the boiling temperature of the original oil has nothing to do with the cracking, because the oil is cracked as a gas after it has reached its boiling point. The necessity of pressure in this process is not to maintain the oil as a liquid, but to control the cracking. The method of operation makes use of vertical steel tubes about a foot in diameter and twelve to fifteen feet long heated in a furnace to high temperature by gas or oil flame. The oil vapors are passed through these tubes under high pressure and withdrawn to a condenser, where the liquid portion is removed, as in the case of vapors from an ordinary oil still. By the selection of suitable temperature and pressure within the tubes, large hydrocarbons are cracked into smaller molecules.

In another group of cracking processes, oil, either as a liquid or as a vapor, or in both liquid and vapor forms, is heated to high temperature while mixed with steam or hydrogen. Various assertions are made—that steam and hydrogen furnish hydrogen, which combines with the hydrocarbon molecules, or that they stimulate the decomposition of large hydrocarbon molecules—but scientists doubt whether hydrogen can be added to hydrocarbon molecules in this way, or whether the decomposition of molecules can be stimulated in a chemical way by the presence of steam or hydrogen.

Chemical Refining.

Distillation of crude oil creates an undesirable color and odor that must be removed by some refining process before the product is placed on the market. The unrefined product is pumped into large 600-barrel agitators and mixed with sulphuric acid for a number of hours. The undesirable molecules in the crude gasolene are known as unsaturated compounds. They have the power of combining with other substances, as sulphuric acid, to form entirely new molecules, which go to the bottom of the tank into what refiners call sludge.

This reaction has been used in practical petroleum refining for the last sixty years, first as a means of removing the yellow color from kerosene, then in later times for the purification of gasolene, the acid being neutralized and removed from the product by subsequent washing

with a solution of caustic soda. However, it is possible that, granting the present rate of progress in the art of cracking continues in the future, this acid and soda washing may be dispensed with.

Apparatus.

The apparatus used in the refining industry is of scientific and general interest.

The still are usually of the horizontal, cylindrical type, made of steel plate and set in brick-work. The upper part of the still is usually exposed to the air, so as to permit of condensation in the upper portion of the still, the liquid so condensed dropping back into the highly heated liquid body.

The top of the still is provided with a dome, ranging from three to four feet in diameter, and from two to four feet in height. This dome is placed in various portions of the still, but the better practice is to have such dome to the rear of the transverse centre line of the still. Connected with the dome is a vapor pipe, or pipes, leading to a condenser. The condenser merely consists of coils of pipes set in tanks into which cold water is continuously injected.

From the condenser the oil passes to the tail-house, where the stream enters a "look," or tail-box, a metal box with glass sides, from which samples are taken periodically. From the tail-box the oil enters a manifold, which is a pipe having a number of flanged openings, each connected to a separate line of pipe. A stop-cock permits or prevents the oil from entering each line, so that the products are separated and diverted at the will of the operator.

These stills range in capacity from 100 to 1,200 barrels of crude oil. A minority of refiners still prefer to use the cheese-box, or vertical, type of still, which was the type first used in the industry.

Specific Uses of Stills.

Stills are devoted to specific uses. Some are devoted to crude-oil distillation; others to redistillation of gasolenes and naphthas; others to reducing (evaporating off gasolenes, naphthas, and burning oils), lubricating-oil stocks, and are termed lubricating stills. Dry steam is usually employed in the naphtha redistillation and lubricating stills. The steam is introduced into the bottom of the still through a coil of pipe, so that steam can be distributed evenly throughout the oil.

The steam serves to agitate the oil and to prevent overheating by too long contact with the highly heated still bottom. The great advantage, however, lies in the fact that the hydrocarbons distill over at temperatures below their normal boiling-points. The explanation is that the pressure of the atmosphere is divided equally between the steam and oil, with the result that the partial pressure on the oil is less than the atmospheric pressure. Fire is used under the stills to control the steam distillation.

Many refiners prefer to run distillations in their lubricating stills under reduced pressure (in vacuo), the pull of the vacuum pump serving to remove the vapors from the still as fast as formed.

Of late years it has become customary to place a high tower, which is a shell some twenty to forty feet in height, over the naphtha steam still, or in close proximity thereto. This tower is filled with obstructive material, such as tile, etc. In the operation of this tower, naphtha vapor from the still meets a current of cold naphtha going to the still. A heat exchange is effected, with resultant economy in the naphtha distillation.

The practice is rapidly becoming more general of using similar towers or combinations of towers in crude distillation.

The most advanced practice is to use four such towers per crude still. In this case the towers are of smaller size, and the respective towers are graduated in size. The use of towers enables the distillation to be carried in one operation down to coke, and permits the efficient separation into various products to be made at the same time. This does away with the necessity of running bottoms from paraffin base crudes in tar stills for wax and coke.

The naphthas and gasolene are agitated in vertical towers, lead-lined, having capacities ranging from 600 to 1,200 barrels per charge. This for the purpose of removing objectionable color and odor. The oil is agitated by means, usually, of an air blast, with from four to ten pounds of sixty-six-degree Baume sulphuric acid per barrel of oil. The acid sludge is permitted to settle, and is drawn off from the bottom of the agitator. The charge is then washed with water, which is settled and drawn off, and the charge again washed with a 1 per cent (twelve degrees Baume) solution of soda lye (caustic soda), which is removed as above, and water washing again practiced. After such treatment, the charge is steam stilled, as above described.

Methods of Up-to-date Refineries.

The more advanced refiners use a continuous method of treating with sulphuric acid and caustic soda, which eliminates the evaporation losses necessarily incident to agitation with air of a highly volatile material like gasolene. This continuous method involves a series of five towers from one to another of which the oil is passed, in the course of passage being subjected to the successive steps enumerated above.

Heavy lubricating oil stocks are similarly treated in the agitator, except that the amount of acid is greatly increased.

Cylinder stocks and other "lube" stocks are subjected to what is called filtering. The filter consists of an upright vertical tank in which Fullers earth is usually placed. The oil is permitted to percolate slowly through this material, which removes mineral matter, giving a resulting clear bloomless product.

After refining, the oils are stored in bulk in steel tanks of varying sizes. Gasolenes and naphthas are usually shipped in bulk in tank cars of from 6,000 to 10,000 gallons' capacity. For foreign trade such products are shipped in tank steamers or in drums or cases. Shipment is sometimes made to isolated districts in this country in this manner. Lubricating oils, after compounding into greases and oils of various grades, are shipped in cans and barrels.

Tests.

The petroleum industry is conducted on the basis of recognized standards of quality and testing is absolutely necessary in the interests both of the consumer and the refiner. In some instances it is compulsory by statutory enactment. As a matter of fact, the Standard Oil group of companies derive their names, and their business is founded, on this conception of marketing standards.

Large numbers of physical and chemical tests are applied to crude petroleum and its products. Space will not permit of going into the nature of these tests in detail. It will be sufficient for present purposes to indicate briefly the nature of the tests which are made of the principal products. Crude oil is usually tested for its specific gravity and the amount of water and earthly matter contained therein. It is also analyzed by distillation to determine whether there has been

OIL POSSIBILITIES IN PONTOTOC COUNTY, OKLA.

From U. S. Geological Survey.

IN the course of a recent examination of a part of T. 4 N., R. 7 E., Pontotoc, County, Oklahoma., made by the United States Geological Survey in co-operation with the office of Indian Affairs, Department of the Interior, a small fold in the rocks was mapped by Heath M. Robinson, of the Geological Survey. This fold, which is more favorable prospective oil and gas territory than the surrounding country, is described by Mr. Robinson, who offers some suggestions as to the location of the first test with the drill for oil or gas and the probable depth at which the oil-bearing sands may be found.

The fold has the shape of a small dome that is tipped up on its southeastern side. The highest point on the dome is about 700 feet west and about 200 feet north of the southeast corner of the NE. 1/4 of the NW. 1/4 of sec. 9, T. 4 N., R. 7 E. From this high point the rocks dip toward the south and slightly toward the east to that part of the dome that is tipped up the most, a point that is about 300 feet north of the center of the SE. 1/4 of the NW. 1/4 of sec. T. 4 N., R. 7 E. This dip amounts to about 10 feet, possibly more, within a distance of about 600 feet. From the high point the rocks dip toward the east about 30 feet within a quarter of a mile. Possibly the eastern dip extends farther. From the high point the rocks dips toward the northeast about 35 feet through a distance of about 1,800 feet. to a point about 500 feet east of the northwest corner of the NE. 1/4 of sec. 9, and possibly beyond, the rock exposures being poor. From the high point the beds dip toward the north about 70 feet in a distance of about 3,800 feet, to a point about 700 feet west of the northeast corner of the SW. 1/4 of sec. 4. Between the high point of the structure and the northwest corner of sec. 9, a distance of about 2,000 feet, the rocks dip 70 feet toward the northwest. The normal dip in this vicinity is toward the northwest and amounts to about 100 feet to the mile, so that the northwestern dip extends beyond the northwest corner of sec. 9. From the high point the rocks dip toward the southwest about 30 feet before reaching the southwest corner of the NW. 1/4 of sec. 9, about 2,500 feet distant.

The best location for a test for oil or gas on this structural dome is about 700 feet west and about 200 feet north of the southeast corner of the NE. 1/4 of the NW. quarter of sec. 9, T. 4 N., R. 7 E., which is the high point of the dome.

In a general way the following areas are on the dome described above and consequently afford more favorable prospects for oil and gas.

All the NW. 1/4 of sec. 9, T. 4 N., R. 7 E., expect the 10 acres in the NW. 1/4 of the NW.1/4 of the NW. 1/4 of sec. 9.

The westermost 40 acres of the NE. 1/4 of sec. 9, T. 4 N., R. 7 E.

The SW. ¼ of the SW. ¼ of the SE. ¼ of sec. 4, T. 4 N., R. 7 E.

The east half of the SE. ¼ of the SW. ¼ of sec. 4, T. 4 N., R. 7 E.

The northermost 40 acres of the SW. ¼ of sec. 9, T. 4 N., R. 7 E.

The area around those outlined above should be regarded as wildcat country, which is less favorable prospective oil and gas territory than the areas on the structural dome.

The closest oil well, which is known as the Mascho well No. 1, is on the George Wade farm, in the NE. ¼ of the SE. ¼ of the NE. ¼ of sec. 3, T. 4 N., R. 7 E., which well is a little less than 2 miles from the highest point of the structural dome described above. In the Mascho well No. 1 six sands besides the pay sand were found which "showed" oil in small quantities. The pay oil sand was found at depths between 1,052 feet and 1,065 feet. A number of the sands in this well showed small quantities of gas, and fresh water sands were found at depths between 130 feet and 148 feet and between 310 and 320 feet. Between 370 feet and 373 feet also a little water was found. A test well drilled on the high point of the structural dome described above, should find the sands about 130 feet lower from the surface than in the Mascho well No. 1.

As the geologic structure of the area outlined above is favorable, as the area is less than 2 miles from a producing oil well (the Mascho No. 1), as the pay oil sand of the Mascho No. 1 should be found at a depth of less than 1,300 feet on the structural dome described, and as there is a possibility of finding porous sands below this depth it is recommended that the area described be tested by the drill and that the test well be carried to a depth of 1,500 feet in order to test thoroughly the sands found in the Mascho well No. 1. If the test well is carried to a depth of 4,000 feet it will probably pass through the beds within a reasonable depth from the surface that might carry oil or gas in this vicinity.

It is emphasized that the recommendations made by the Geological Survey by no means guarantee that oil or gas will be found in the areas described, but it is believed that losses by futile drilling will be materially reduced if the test for this locality is drilled in the area indicated above.

EPIGRAMS

There are three things that make a nation great, these are fertile fields, intelligent workers and good roads. The United States has the first two and soon will have the latter.

Human nature has not changed in the centuries but the manner of warfare and the weapons have. War is Hell and will ever remain so.

Things are moving so fast nowadays that people who say it can't be done are interrupted by some one doing it. Now will some genius please devise a means of clearing the sea of the subs.

These are times that try men's souls. It also develops the brave and brings them to the front while the dross sinks to the bottom.

SINNER AND SAINT

. . . . . OR . . . . .

THE ROGUE'S MARCH TO HEAVEN

Being an Authentic Account of the Life of Ben Hogan, Desperado and Divine.

BY A. LIBRY BOOKMAN.

(Continued From the Outing Issue, Vol. 12, No. 3, 1917.)

WHEN, in a preceeding paragraph of this tale of the meek and lowly desperado, the Ben Hogan of the early days of the Oil Regions, afterwards the Rev. Ben Hogan, of evangelistic renown, I made the remark of accident pure and simple that "life is the strangest thing within the circle of existence," little did I dream that the demonstration of the truth of the same was to be supplied on this trip from Foxburg to the nearby and nameless town at which the reception to the said Rev. Ben Hogan and Mrs. Rev. Ben Hogan was to be given; and to which my Uncle Peter, my Aunt Clementine and I myself had been honored with a special invitation.

Men and women are, indeed, curious and interesting expressions of Existence. The mere contemplation of their diversities of color, for instance, of shape and form, is sufficient to occupy the time and richly reward the leisure of the observer. The attractions, antagonisms and antipathies of the sexes have crowded the libraries with pleasing romances and tearful ballads; while the tragic records of humanity have been made blood-red with slaughterings and murderings which spring from the savage breast of rage and anger, common to us all.

But it was to the outbursts and outcries of men and women that I especially referred when using the above-quoted phrase, rather than to the incidents of love and hate, of evil doings or amiable manifestations. It has taken all this time and the use of all these words to make this clear. Time and words, however, are but the frame of the picture I had in mind and still have in mind. The picture we three gazed upon when we finally arrived at the railroad station of the nameless town was this :

The platform was crowded with men and women, all of whom were of the unmistakable pious or religious type. Some were tall and slim, others were sleek and fat; a few were good to look upon, but the majority, the great majority, were severe in appearance, cold as icicles in attitude and, as said before, unmistakably of the hysterical kind. My Uncle Peter, with his usual disregard for consequences and personalities, said something about the season being the time for the gathering of nuts; that there was a heap of them before us, and that Ben Hogan was the finest nut-cracker ever met with. My Aunt did her utmost to

restrain Uncle Peter's comments and stay his flow of words—but in vain. The communion, the commingling and the conversation of the saints, she well knew, was irritating to my Uncle and she feared some awkward outburst on his part.

What was anticipated by her very soon developed.

A nervous little man, with excessively bad teeth, cold gray eyes and hard, thin lips, squirmed around my Uncle Peter like a twisting worm for a brief moment and then, with impetuous warmth and surprising suddenness, grasped his hand and cried aloud, in a voice like the one so often described as "issuing from the grave," "Joy, joy!"

"You have another guess coming, stranger!" responded my Uncle Peter, as he flung the little chap off with some degree of violence. "My name is not Joy nor Joyful either! I may have been jolly in my day, but my name is not Joy."

"You certainly have come here, brother—have you not—to join in the welcome to the Repentant Sinner over whom there is more joy in heaven than over ninety and nine just men, as the scripture has it ?"

"Whom did you say " inquired my Uncle Peter.

"The Repentant Sinner."

"I am from the Oil Regions, stranger, and, therefore, have no acquaintance with Repentant. The Sinner family is a vigorous and numerous one over our way, but, as far as I know, there has never been a Repentant among them. Perhaps you have used the wrong family name! Try again, friend."

"I am alluding, brother," replied the squirmer, "to the 'Strayed Sheep' which was lost and, being found again, great was the rejoicing!"

"One of the Sheep family, eh! Oh, yes! I have met several of them in my time, but I never cared much for mutton. Go on—go on! you may get my goat if you persevere."

"I mean the 'Piece of Silver' which was mislaid and, when found, was returned again."

"I have heard of the Silver being lost, but you will have to produce an affidavit before I believe that the finder would return it!"

"It is to the Brand—the Brand plucked from the burning that I have been alluding," said the little man with some show of disappointment. "Surely, brother, you have heard of the Brand plucked from the burning?"

"Tell me, gentle sir, in plain and simple words, what the devil you mean, or who the devil you are talking about," rejoined my Uncle Peter, with some vigor.

"The Rev. Ben Hogan!" replied the little man.

"Oh! why didn't you say so in the beginning, and be done with it, without indulging in such opulent terms and perplexing phraseologies? Of course, I know Ben Hogan—know him very well—intimately in fact! He was my instructor in my early youth. I have followed him from Pithole to Petrolia; from the gymnasium to the female seminary; from the prize ring to the pulpit. I have come over from Foxburg especially to meet him. Long may he live, and famously may he flourish, for he is, indeed, a marvelous character. Many and many an ancient life has he reinvigorated and saved."

"Peter, Peter!" cautioned my Aunt Clementine. "Remember where you are and the company you are in! Please now—please for Mr. Hogan's sake!"

"Who, by his repentance, made the angels in heaven rejoice!" fairly shouted the little man. "Yes, yes! there is joy in

Galilee because the Sinner has ceased to sin; because the Strayed Sheep has been found again; forsooth the Piece of Silver has been returned, and the Brand has been plucked from the burning—because Ben Hogan, the Wickedest Man in the World, has become a saint—a saint of saints! Soon, very soon, will he appear among us, with his wife, his blessed consort, leaning upon his strong and powerful arm. Come, brother; come with me and permit me to introduce you to the gathering of the elect of our pleasant town."

My Uncle Peter was fairly dragged away from my Aunt and myself, despite his resisting endeavors. The "nut," as he afterwards delighted to describe his captor, seemed for the moment to be endowed with almost superhuman strength, and Uncle Peter had to go along with him, willy nilly.

A general introduction to the assembled curios followed without my Uncle's consent or desire. I well remember how he was presented to Mrs. Pants, a thin lady; to Mrs. Whiskers, a delicate woman; to Miss Trousers, a pale creature; to Deacon Duty; to the Rev. Weeping Willow, and the Rev. Foulmouth Smythe, the Prohibition orator; as well as others too numerous to mention, but decidedly all alike, and all fitting nicely into the vulgar word "nuts." They were laying in awake for the Rev. Ben Hogan, the repentant one, etc., etc., and rejoicing over the conversion.

My Uncle Peter, always a polite man, went through this ordeal of introduction to the saints in very good form. There was, however, something strange and dolorous in his voice as he murmured: "Glad to meet you—glad to meet you—Mrs. Rev. and Mr. Rev.! Glad to meet you, indeed!"

Both Aunt Clementine and I trembled to think what choice and elegant lauguage it would be our lot to listen to on our return to Foxburg—decent, polite, sleepy old Foxburg. The Foxburg of the Lord and Lady of the Manor House upon the hill—the town of the feudalism within the democracy—the seething democracy!

Relievement came suddenly to Uncle Peter, for with the blowing of the whistle of the incoming train and the clang of the noisy locomotive bell, the "nut" released his grip on my Uncle Peter's collar and, with the other chosen ones, ran towards the train like a flock of crows. They gathered about the steps of the first passenger car, and when the powerful form of Hogan—the Rev. Ben Hogan—and Mrs. Ben Hogan, finally appeared upon the platform a jubilant shout of welcome and rejoicing was raised by the entire gathering. "Behold the Repentant Sinner—Hallelujah!" was the cry, mingled with allusions to the 'Brand' and the 'Lost Sheep.'

Hogan and Mrs. Hogan slowly decended the car steps and stood upon the platform shaking hands and receiving the greetings and salutations of the Saints.

This was the first time I ever saw Mrs. Ben Hogan—the alleged French Kate, who had shot Pat Shay at the dive in Babylon, who had fascinated congressmen in Washington, and who was said to have been involved in that political intrigue which resulted in the assassination of President Abraham Lincoln, by John Wilkes Booth of unhappy memory.

In appearance she was a tired, exhausted and weary-looking woman. Her hair was black, her complexion white but faded, and her blue eyes lacked the fire which is evident in the portrait of French Kate, the converter, as displayed in the last issue of this magazine. I mentally said to myself: "If that is French Kate,

she is not the French Kate depicted in the Oil Region books, and talked about by the Oil Region authorities. Piety has no doubt changed her—changed her for the better spiritually if not for the better in appearance." The Mrs. Hogan I saw was a mild, frail and modest-looking woman, rather than the disregardful and defying creature such as one would naturally expect French Kate to be.

Evidently some similar impression was made by the vision upon my Uncle Peter. The moment he beheld Mrs. Hogan he straightened himself up as if surprised—dazed rather. Then, wiping his brow with his handkerchief and using strangefully unfamiliar words in an undertone, he surveyed her from head to foot with piercing glances. I could see very readily that he was in some sort of optical confusion, and of this I was made positively certain when he suddenly turned to me and, with a shake of his head, said in a half whisper: "Libry, this is a mystery !"

I surmise what the utterance referred to. Pretending, however, that I did not quite understand, I inquired what he meant. Again passing his handkerchief over his brow, he finally remarked: "Well! Bill Jellison, who was a knowing chap, and who kept the hotel at Petrolia, said that the marriage license and the wedding certificate were but pieces of paper to Ben Hogan. Bill told me he actually saw the wedding certificate which made French Kate and Ben Hogan man and wife, legally and eternally. But, as I said before, this is a mystery—a great mystery!"

Then, getting the grip upon himself again and assuming his usual good manners, he turned to my Aunt Clementine and said: "That is Mrs. Hogan, whom you have longed to see and often desired to meet. What do you think of her?"

"She was a good-looking woman," rejoined my Aunt, "a very good-looking woman before her health failed, as it evidently has. Who was she?"

"It can't be proven by me," responded my Uncle Peter, with more or less vibration in his tone of voice. "But come, let us get to the hotel and brush up for dinner. The reception will take place at eight o'clock this evening and by that time we will be freshened up a bit."

A few steps brought us to the hotel, which was a comfortable, old-style Inn, with a circling, wide and comfortable porch about it; such an Inn as is no longer to be found either in the Oil Regions, or in the country around about it—though formerly very common.

The moment we ascended the steps another surprise overcame us like a summer's cloud. This time the surprise was pleasant and agreeable. The porch was crowded with men whom we all knew, and whom we were very glad to see. Every one of them called my Uncle Peter by name, and greeted him and my Aunt most genially. To my astonishment a giant chap rushed towards me and fairly lifting me off my feet exclaimed: "You here, too, sonny; don't you remember me?"

I had to confess that I did not—that he had the advantage of me, I being a stranger. Then he was kind enough to tell me that he was Eph Parker—the Eph Parker of the old days of the ferry, who had so often rowed my blessed mother and myself across the river, when we came to visit my Uncle and my Aunt at Foxburg. Right glad was I to see him, and I told him so forthwith, asking him how he could recognize me after such a lapse of time and such a change as the years had wrought in me. He answered that he took the chance merely, having been told that whenever my Aunt

Clementine was seen in the company of a male stranger wearing goggles and pale as a ghost, he would know it was her nephew, Libry Bookman, a visitor to Foxburg, hailing from the royal city by the sea—that city where the color is crushed out from the cheeks of man by the iron heel of Life's fierce struggle. None other walked with her in the twilight and, sure, the twilight was creeping down the mountain side as the three of us mounted the steps.

This accidental meeting with the ferry-boy and all the rest of the oil men—for oil men they were—was very pleasing to us all. Eph Parker took charge of us and entertained us handsomely. He was in a very talkative mood at the time and reviewed all the pages of his memory. He talked of Hogan, of course, saying that he was amazed at the conversion of the dive-keeper and one-time prize fighter. Furthermore he told us all the news about the Joneses. The whole pack of them had become very wealthy; the women had a weakness for revivals and religious endeavors; while Fullerton Jones —"Old Jones," as he was generally called—had become a furious puritan, who talked morality all the time. Fullerton disliked Ben Hogan; disliked him intensely, as everybody knew. He never forgave Hogan for a trick Doc Barnes and Ben had played upon him one day at the Landing. It was a fine trick! Doc Barnes and Charlie Green and Tillinghast were in the crowd and, probably, they would tell us all about it before the evening was over. They were a hungry lot just at the moment, having traveled far to greet the evangelist and see Mrs. Ben Hogan, the lady who had converted the Wicked One.

"Who is she, Eph?" I inquired, recalling Uncle Peter's perplexity and my own conclusions of a few moments before.

"You can't prove it by me, sonny," was the reply. "I never was very good at testifying for or against women. Ladies like your mother and your Aunt Clementine were always sort of shy when Eph Parker was around. As for the other kind—the kind we used to know when Ben Hogan ran the gymnasium and the seminaries in the oil country—believe me, sonny, I always felt sorry for them. I am not going to say a word about this Mrs. Ben Hogan, whether she is French Kate or another girl. Good luck to her! Never ask that question again, for if you do, I'll fire you into the river, as I did when I rowed you and your mother across to the Foxburg side. It learned you to swim. You are a lucky chap, all right."

"To her dying day, Eph," I replied, "my mother thought I slipped and fell over board and that you jumped in after me and saved my life. An hour or so before she passed away she said in a whisper to me: 'Libry, I am very thankful that Eph Parker was on the ferry the day you tripped and fell. What a narrow escape it was'!"

"A narrow escape, my boy," said Eph.

When the three of us went into the dining room for supper we were placed at a small table which adjoined another one at which sat two men who were talking in a rather loud tone so that we could not help but hear their conversation, which was about the mysterious Mrs. Ben Hogan. The men called themselves Kelly and Brown respectively. Mr. Brown was maintaining, with much vigor, that the Mrs. Hogan who was with the evangelist, was none other than French Kate, whom he had known very well. Mr. Brown declared that, no matter what some people said, and no matter what others thought, no matter what kind of a life French Kate had lead, she was a

woman and, as such, was entitled to the kindest of words and the benefit of the saving doubt. She was an educated woman, moreover, speaking six or seven different languages, as Hogan himself declared in his book. She was a very handsome creature, an elegant dresser, and noted for her liking of jewelry. He remembered very well, did Brown, that when French Kate first came to Pithole in '66, she wore a peculiar charm—a diamond-studded cross. A week or so previous to the announcement of the conversion of Hogan he had met Ben by accident, walking down Broadway in New York City. He was with a woman. This must have been the woman who converted him, and that woman wore on her breast the diamond cross which made French Kate so conspicuous and notable during the days of her criminal career throughout the oil country, which cross Hogan himself often wore. In his mind there was no doubt about the identity of French Kate and Mrs. Ben Hogan.

I turned to my Aunt Clementine and said to her in a whisper: "Aunt, there is an explanation due from you! The diamond cross is on your breast. How did it get there? You told me a lady visiting at the Manor House of Lord and Lady Fox had seen it and admired it after it had been returned to you by Ben Hogan; that you had sold it to her for a large sum; that this money had enabled Uncle Peter to drill his oil property, making you rich once more. How is it that the cross has found its way back to you again?"

"Another mystery, Libry," remarked my Uncle Peter.

"Lord Fox can tell you all about it, Libry, if he chooses to," said my Aunt as the subject was dismissed.

Mr. Kelly, the friend of Mr. Brown, maintained with equal positiveness that the Mrs. Hogan who alighted from the train with the Evangelist was not and could not be the French Kate of the diamond cross, whom he had often seen. He had just returned from a long Western trip, said Mr. Kelly. He had been to Hot Springs, in Arkansas, on this particular trip. His rheumatism was bad and he had stopped over in order to boil out. One evening he happened to see an announcement that "Ben Hogan, the Wickedest Man in the World," would deliver an address at such and such a hall. Having known Hogan in the Oil Regions, he very naturally became one of the company who heard him speak. There was a woman sitting on the platform wtih Hogan at this meeting. The evangelist told, in his crude, matter-of-fact way, about his life, confessing the many crimes he had committed, the killings, the thefts and other evil deeds which made his career notorious. Little by little he led his hearers along the crime-stained path which finally resulted in a stroll down Broadway one summer evening in company, as he said in his book, with "My wife, a good and Christian woman whom I had met and married." This woman guided me into the old Star Theatre at Broadway and Twenty-second street, New York. Mr. Charles Sawyer, "the converted soak," was speaking. He told of his reformation; how, being strengthened by divine grace, he had overcome his desire for liquor and in an instant was a new and better man. Going on, Hogan told how the thought flashed through his rum-poisoned mind that if Sawyer could so easily overcome the taste for liquor, so also might he, Ben Hogan, the sailor boy, the strong man, be redeemed and saved. Hogan left the theatre that summer night a new and better man. His last words were: "All this is due to the good and

Christian woman whom I met and married." That woman, declared Mr. Kelly, was not "the French Kate whom I knew in the Oil Regions; she was and is the very Mrs. Ben Hogan who alighted from the train this evening with Ben himself."

Thus did I find myself in a double mystery—first, the mystery of the diamond cross upon my good Aunt's neck, and, second, the mystery of the Oil Regions, to-wit: Who was Mrs. Ben Hogan, the instrument of the miraculous transformation wrought in the Wickedest Man in the World?

Kelly and Brown soon arose from the table. As they departed from the room Kelly made a remark which impressed itself upon my mind. "Of course, Brown," he said "what I have told you about French Kate is based upon what Hogan himself tells in his book. My doubts as to the identity of the woman I saw both at Hot Springs and at the station here may be badly founded. French Kate may, in spite of appearances, be Mrs. Hogan. She had many very remarkable characteristics and great strength of character. I hope she did reform as is stated in McLaurin's 'Sketches in Crude Oil.' Hogan speaks well of her, and so will I—or you may knock the 'L' out of Kelly, as the song has it."

This utterance of Mr. Kelly recalled to my mind the Foxburg address and the words of Mr. Hogan as he appealed in manly tone for the Forsaken One—that woman who, forgetting her mission in life, has strayed from the narrow path. "Extend to her," I remembered Hogan having said, "extend to her the helping hand and the winning word. Tell her she has an advocate with the Father which is in heaven and a friend in you. Then, mark my words, that which is crooked will be made straight."

As Kelly and Brown went out the door, two other men entered. The first was the fat banker whom I had seen at Foxburg upon the occasion of the elevation of young Lord Fox, and whose backbone creaked when he bowed low as the Father said: "Subjects, behold your future master—look upon your subjects, Lord!"

"One of your Aunt Clementine's relatives, Libry," remarked Uncle Peter, as he indicated the fat one to me. "He married her forty-second cousin you know—and the poor woman died. He is called the Money Seller. When I was hard up and trying to get some funds, he swam the river to get away from me. He is a kind chap, however, and had a very peculiar experience on the Foxburg hill one day. He was walking along a path and a copperhead snake, desiring to make his acquaintance, grabbed him by the leg."

"That must have been a fearful ordeal," I replied. "Copperhead snakes always nauseate me. I can smell them from afar. They are hideous things. To be bitten by one and survive is quite an experience."

"In this case," said my Uncle Peter, "the Money Seller survived—and there he is—but the copperhead, being a most delicate reptile, died."

My Aunt had told me time and time again of Uncle Peter's dislike for the Banker, which dislike was based on the facts that, as set forth in the first part of this story, Mr. Fullerton Jones had promised a lease of his productive land to Uncle Peter; that the Banker had slipped in somehow, secured the same and had grown rich on the output of the oil wells drilled thereon.

The man with the Money Seller was a distinguished looking individual arrayed in black, the gloomiest kind of black.

"The popular body-snatcher of the Oil Regions," said my Uncle Peter, referring to this latter man.

"The what?" I asked, not quite understanding what he meant.

"The coffin seller," was the answer. "That chap had the gall to ask your Aunt Clementine, but a day or so ago, if my health was good. I confess I am not very well—the old cut in my side, given me by the thief who stole the diamond cross in the long ago, hurts me occasionally, but I am strong and well and not quite ready for the undertaker yet."

We finished our meal in due course and then, having half an hour still at our disposal, we went out on the porch, where we found the oil men enjoying their cigars. They were talking about Hogan, as one would readily surmise, and every man of them was declaring in turn that he himself was the only fighter in the Oil Regions who could "whip Ben Hogan." My Uncle Peter said that if Hogan were to drop in among them they would take to the tall timber and do their boasting behind the trees. "It was a way of Hogan's," he said, "to jolly these chaps along. He made them all believe they were fighters. He could tie one arm behind his back, however, and whip them all."

Mr. Doc Barnes obtained the floor by and by and told us about the Omaha fight for the heavy-weight championship of the world, between Tom Allen and Hogan. At this fight Doc had been a bottle holder, or perhaps the towel man. He described how Hogan, being the smaller man and not in the best of health, began the battle by drawing first blood and knocking Allen down in the initial round. Again he toppled him over in the second round. Allen then, resorting to foul tactics, struck Hogan a foul blow in the groin, below the belt. This blow rendered the latter unconscious. The physician who was present insisted on Hogan's retirement, but the latter refused, and resumed the battle again. Another foul blow in the groin followed, and Hogan had to stop. "We won the purse, however," said Mr. Barnes. "Hogan always seemed to win out in all his contests. He even got the best of old Fullerton Jones, the moralist of the Oil Regions. He was painting his dive with a new coat of red paint one day, standing upon the top of a high ladder which leaned across the sidewalk. Old Jones had tried to drive him out of the region, saying he was a bad man and the ladies he brought with him were devlish creatures. There was war between them. As old Jones passed under the ladder, Hogan slipped, or seemed to slip, and down came the bucket full of paint, and the puritan was dyed red from head to foot. It was a great joke—the whole oil country laughed at it. Old Jones evened up things, however—not on Hogan, but on the poor women who sacrificed themselves for the safety of the Regions. Hogan's dive was burned to the ground one day, and the women flung their silks and laces out of the windows and saved themselves as best they could. When the fire was finally subdued, along comes old Jones with a pitchfork, and what did he do but pitchfork the silks and laces into the river, saying that "Women who wore such scanty and flimsy clothes were a danger to the morality of the community."

While we were yet laughing about this episode of the Jones red paint and the lightly-dressed women, there came out of the darkness the form of a wretched and wearied looking female, as if the story of the unfortunate ones, fire-scorched, had summoned her into our midst. She led two little children by the

"NATIONAL" PREPAREDNESS

A gentleman once said to a representative of the National Tube Company—"What can you say about pipe; it's simply a bunch of air with a piece of steel around it." An immediate answer was not available, but shortly after this a book, **"The Age of Power,"** written by an engineer, came to the attention of the person addressed—and the theme was this: There is less difference than is usually supposed between the 20th Century and, say, the 10th or 12th or any other previous Century. There is nothing new under the sun. There is a difference, however, in the externals, and this difference can be reduced to some phase of the **Generation, Transmission and Use of Power** and the ramifications **thereof.**

Inasmuch as pipe is an essential part of power, this would seem to be an interesting idea.

An attempt was made to elaborate the themes in prose, without much success. The matter was then put into the hands of Berton Braley (the poet of industry) and the following poem is the result. The whole thought of the poem is contained in the next to the last line—"Framework of civilization is wrought of it." It should be noted that this poem has particular reference to **daily living** preparedness, and not in any way to **military** preparedness.

Are we prepared ? Yes, for every emergency,
  Every contingency under the skies,
Ready for cases of danger and urgency,
  Ready for commonplace needs that arise;
Fully prepared for our labor or pleasuring,
  Armored and armed for the course to be fared,
Fit for each chance that the mind can be measuring—
  "NATIONAL" Tubing has made us prepared.

"NATIONAL" Tubing prepares us for traveling,
  Carries the steam that is driving the train;
Keeps us in ease as the miles are unraveling
  Over the mountain and over the plain.
"NATIONAL" Tubing brings water of purity
  Into our homes from the faraway hills;
Stands at our windows, a guard of security;
  Brings us our gas—and the drudgery kills.

Why, from the time we are infants in carriages,
(Go-carts of "NATIONAL" Tube as you know)
Up through our childhood, our loves and our marriages,
On 'till our tresses are covered with snow,
"NATIONAL" Tubing's assisting and aiding us,
Keeping us warm when the icy winds blare,
Holding up awnings, in summer, for shading us,—
"NATIONAL" Tubing has helped us prepare.

Casing for oil wells, shafts for machinery,
Pipes for the drills digging copper and gold,
Poles for the power wires looping the scenery,
Frames for the plows that are turning the mould;
"NATIONAL" Tube in a thousand varieties
Serves for ten thousand requirements of life,
Whether in places where comfort and quiet is
Or in the midst of the heat and the strife.

So when you speak of Preparedness "NATIONAL",
"NATIONAL" Tubing is THERE, it's a Pipe !
Fully prepared for the needs that are rational,
Builded for service of many a type;
Dreamers have dreamed and the thinkers have thought of it
Till every nation its service has shared;
Framework of civilization is wrought of it,
"NATIONAL" Tubing has made us prepared !

By Berton Braley.

hand and said, in a trembling but rather determined tone of voice, that she "wished to see the Rev. Mr. Hogan."

Someone inquired what her errand was and she told her story, which was about as follows: She had been married by Ben Hogan when he ran the dance house at Babylon. She had her certificate with her. Two children had been born of that marriage. Her husband had lately been fortunate in the oil business; he had drilled in, but last week, a well in the Brokenstraw district which was good for five thousand barrels of oil per day. She had stuck by her man through his poverty, and now that he was rich he was going to throw her overboard, declaring that the Hogan marriage was a fraud and a sham; that Hogan at the time was a dive-keeper and not a minister, and had no authority to perform the marriage service. It was the old story of another woman appearing on the scene when riches came—when prosperity was sure. There was something very pathetic in this episode. We all felt very sorry for the unhappy woman and all pitied the helpless little children. There was something almost ghastly in the situation. The strain of the uncertainty and the tragic combination of deception and confidence which was mingled in the woman's story was relieved of a sudden by the announcement of the Squire of Foxburg, a well known legal luminary, who told the woman that if the ceremony which joined herself and the Brokenstraw operator in the holy bonds of matrimony was entered into by the two in good faith, even though Ben Hogan was not a minister at the time, and had no right to officiate, the wedding was legal. The law books were full of such happenings, and invariably the decisions had been in favor of those who entered into the contract in good faith.

The woman with the two children went away rejoicing, and I afterwards learned that the operator had to acknowledge her and her children. Her status is now unquestioned by the evil minded, and undisputed by the authorities.

Eight o'clock being now close at hand, we all departed for the hall at which the reception to the Rev. Ben Hogan, Evangelist, and Mrs. Ben Hogan—be she French Kate or some other woman—was to be held.

This reception was one of the most curious and interesting events I ever had the satisfaction of attending. The pious people whom we encountered at the station were all present, reinforced by others of a similar type. The visiting oil people came in little groups, as well as the Money Seller and the Popular Undertaker. Hogan and Mrs. Hogan stood in the center of the room and were introduced to the company by some lady who had charge of the function and who seemed to be familiar with the names of all present. Following the introductions, a light repast was served.

While we were enjoying the "missionary" cake and coffee, two strange men came sauntering into the hall.

"Pat Shay, upon my word!" said my Uncle Peter, as he indicated the first of the two visitors, who was minus an arm. "We are in for a surprise. Pat Shay is the man French Kate shot one night at Babylon when she and Hogan, using champagne bottles and bullets, cleaned out the rival dive of the Shay Bros. That other chap with the shifting eyes and dodging manner is Burke—Burke, the pickpocket—Burke, the thief who stole the diamond cross from your Aunt's neck the day I first met her by the seaside. These men have come here for no good purpose—it means a disturbance of some sort."

And sure enough, the disturbance followed. The one-arm Pat Shay, with Burke at his side, sauntered over to where Mr. and Mrs. Hogan were sitting and, looking at the latter, said in a sneering tone: "I never thought, Mrs. Hogan, that you would fall so low as this! Converted, eh! It's a nice business you are in, indeed.

Burke glanced at my Aunt Clementine and, seeing the diamond cross sparkling upon her neck, said half aloud: "So it's come back to you again, has it?"

Mr. Eph Parker, good old Eph, was at Mr. Shay's side in a jiffy. He took hold of him, headed him for the door, and out Shay went before Mr. Parker's upraised foot.

Mr. Tillinghast and Mr. Doc Barnes attended to Mr. Burke. I heard Tillinghast say: "They need you around the corner, Burke. There is a christening in a Dutchman's house over there. The baby is to be named after you—so go along."

Mr. Barnes fanned Mr. Burke with his handkerchief, just as if he was in a prize ring near Omaha or somewhere else and required towel service.

This interruption sort of disturbed the harmony of the evening. My Uncle Peter was very much upset. He complained more and more of the old wound in his side paining him. My Aunt insisted upon his retiring to the hotel. We soon left, and thus did it happen that we missed hearing the address which Hogan made and which, I am told, was a very telling and successful one.

When we got my Uncle Peter to bed he kept talking about the reception and the strange impression the attitude and the utterances of the religious folks had made upon him. "These people," he said, "have a very strange doctrine. To them 'Sin' seemed to be a good thing, because, if followed by repentance, they claim there is joy in heaven. That's a curious dogma to me. The straight man and the good woman following the right to the end, adhering to the holy living and holy dying, do not make any rejoicings, either in this world or in the next, according to what we have heard these people declare. This seems wrong to me—totally wrong! But, good night, my boy. That cut in my side hurts me again. How strange it was that Burke, who cut me, should have found his way here to this out-of-the-way town. Hogan did it all, however. Good night, my boy."

Long afterwards, in these very days of the present World's War, I thought of the perplexity of my Uncle Peter about the Repentant Sinner; and I recalled how the mad monk, Rasputin, taught a similar doctrine, to-wit: that if one sins and repents, then joy is the result; therefore, to sin, to be guilty of crime, of outrage, and of wrong, is the proper thing.

As the empire of the Czar crumpled into ashes because Rasputin so spoke and taught, perhaps good may come out of the mire of wrong doings.

The next morning we took the train for Foxburg. The details of this returning journey will be recounted in the next issue of this magazine.

BUCKING THE LINE.

BY C. H. OLIVER.

"WELL, Shorty, throw on the rope and go out and take down the log and we'll pull out and see what that bit looks like. I've drilled on some pretty hard stuff, but this beats them all. It don't cut at all. We've got to wear it away. Here we've been on tour for six hours and I don't believe we have made six inches of hole. I wonder how our neighbors across the fence are coming on?"

Big Jim Johnson kept turning the screw while his toolie, Shorty Jones, was getting the rope ready to throw on the bull wheels. Jim and Shorty were very anxious to complete this well as soon as possible, as it was on a line fight, and Big Jim was carrying an eighth in the well. The well was located in new territory, near the new oil town of Oilton. This new town was only six weeks old, but it already had almost a hundred houses strung out along the road, the greater number boarding houses, cheap stores, and saloons—mostly saloons. Every saloon was a gambling joint of some kind. In some of these one could find a half dozen kinds of games of chance. As is well known among the fraternity, there are no greater gamblers than the oil men—always willing to take a chance.

About three months before our story opens, a company of oil men had taken a lease on the old Bolten farm and had drilled a test well. This well came in and for the first week averaged about seventy-five barrels a day. This was the birth of Oilton. A few hours after the Bolten well got the sand, lumber, pipe and fittings of all kinds commenced to arrive. One could see a string of teams and wagons a mile long loaded with all kinds of oil well supplies. The company was called the Bolton on account of the first well having been drilled on the Bolton farm.

At the time of taking the lease, the Bolton had been unable to lease the Jacob Miller farm. This farm joined the Bolton on the west. As their No. 1 well was situated on the western part of the farm, it became a very desirable lease, especially after the Bolton well came in. After this company discovered they had a fine producer in their first venture, they again tried to lease the Miller property, but by this time the owners had advanced the price so much that the Bolton people refused to take the lease at the advanced figure. And as they already had about six hundred acres under lease, they decided to drill what they had.

Jim Johnson, "Big Jim," as he was called by almost everyone who knew him, was liked by everyone. Standing more than six feet, built from the ground up. Weighting more than two hundred and fifty pounds, mostly bone and muscle, and a heart corresponding in size with his frame. Always willing to help anyone in distress, or lend a helping hand to one of the down-and-outs. Jim had the reputation of being the best driller

in that part of the oil country. As Jim would say: "I don't aim to put any silver lining around the hole, but just bury the cable as fast as I can."

Jim had one rival in the drilling game in the person of "Red" Allen. "Red" did not have the drilling record that Johnson had, but there was no doubt that the one who made hole any faster than "Red" was drilling all the time. In drilling oil wells Jim and "Red" were very much alike, but there the similarity ended. While Johnson was liked by everyone and was always helping somebody, Allen was disliked by almost everyone. A driller by occupation, but a bad man by choice. Always boasting of his prowess and imposing on someone who was not his equal physically, it is no wonder he was feared and disliked by the people in general. For some reason best known to himself, "Red" had always steered clear of Big Jim.

The Bolton company had finished their No. 2 well on the Bolton farm. This well was drilled farther north on the farm, but was kept five hundred feet from the western or Miller line. The well started off at better than a hundred barrels a day. A couple of days after the well came in, "Big Jim" was surprised to see a half dozen teams drive up, loaded with lumber. They came across the Miller farm and when opposite the No. 2 Bolton, and almost on the line between the two farms, commenced to unload. Jim walked over to where the men were unloading. He found, beside the teamsters, half a dozen men, members of the Miller Oil company, one of whom was driving a stake not more than twenty feet from the Bolton farm line. One of these men was "Red" Allen. Jim walked over to where the men were standing and asked them if they intended to drill their well that close to the line. They told him that was the intention. He asked them to keep back at least two hundred feet from the line and his company would do the same. "Red" informed him that the Bolton company could drill where they damned pleased, but that was where his company was going to drill. He told Jim that he was carrying an interest in the well and the company had given him the contract for all the wells to be drilled on the farm, and that they proposed to drill as close to the Bolton line as they pleased.

"All right," said Jim; "that means a line fight, and while I know that a line fight is a piece of foolishness, I want to inform you people that we can drill just as many wells and just as close to the line as you can. We were the first on the ground and we have kept more than five hundred feet back from your line with both our wells. Now, you have started this fight, and you will find us in it to the finish."

So this is the conditions things were in at the opening of our story. The Bolton company had offset the Miller Oil company No. 1 with their No. 3, but instead of going up against their rig, had kept three hundred feet north along the Miller line, but was only about thirty feet from the line. The Miller people immediately started their No. 2 rig and placed their derrick clear up to the line, and the fight was now on in earnest.

The Miller company had their rig completed, the engine on the block, and were rigging up before the Bolton people had their rig completed, and had their well under way a full day before their rivals. So Johnson commenced to make hole just twenty-four hours later than "Red" Allen.

"Big Jim" had always made it a rule never to use a piece of bad iron or a piece of rope that did not look good. On the other hand, "Red" would take a

chance on either one. It so happened that on this well his jars showed a small crack, but "Red" said, as he let the tools slide down the hole, "We'll take a chance, that's what Columbus did, and look what he found." But on this occasion "Red" did not have as good luck as Columbus. He had only gotten the tools hitting nicely when they commenced to run light. Knowing something was wrong, he pulled out and found only half the jars hanging to the stem. After a forty-eight-hour fishing job the tools were recovered; but while he was fishing, "Big Jim" had passed him and was almost a hundred feet deeper than "Red."

When Allen found out that Jim was deeper than he, he was furious, for he knew if they had an even break all the way through, and the driller on the opposite tour to Jim held up his end, that "Big Jim" would beat him in.

Allen's tool-dresser was almost as big a blackguard as Allen, and was willing to do anything "Red" suggested.

"I'll tell you, Sandy," said "Red," addressing his toolie, "I'm going to beat that 'Big Jim' in if I have to burn his rig down to do it. I don't like that fellow, and he don't like me. Some of these days I'm going to get him, and I'm going to get him right. If it wasn't for him I would hold the record for making hole faster than any man in this part of the oil country."

A few days after this conversation "Red" broke the pin off of a bit and, after fishing for almost a week, got the bit out, but by that time he was so hopelessly in the rear that there was no chance for him to beat Jim in by fair means.

"Red" Allen and his tool-dresser were sitting at a table in the back room of "The Last Chance" saloon, with a bottle containing whiskey between them. The bottle had been full when they sat down, but was now nearly emptied.

"Now, Sandy," said "Red," "we've got to do something, and do it quick, to get this Jim fellow. There's no possible chance of our catching up to them. Now, I don't propose to let them beat us in to the pay. Listen to me, Sandy; they've just got the small casing in. My plan is this: We'll go up to the glycerine magazine, steal a couple of cans of glycerine and lower it down the hole. Then I know where there's a old, worn-out bit we'll drop in on top of the shell. Let me see, this is Thursday. Well, after we shut down Saturday night we'll get the stuff. I'll tell you where the old bit is, and on your way on tour you get it and bring it over. Then, tonight, after we come off tour, we'll go over to the factory, get a couple of ten-quart cans and hide the stuff under the derrick till we are ready to use it. Can you imagine, with twenty quarts of that stuff going off at the foot of that small casing, that "Big Jim" will ever get his tools on bottom again? Now, of course, you and I must not be found in the vicinity of the well when the stuff goes off, for if the oil men in this field ever suspected that we were the cause of the trouble, they'd soon make this neck of the woods too hot to hold us. This old bit doesn't weigh more than forty or fifty pounds, and this is the way we'll do: I know where there is an old shell that will hold twenty or thirty quarts of the stuff. Well, we'll load that and lower it down in the hole with our measuring line and let it set on bottom. This will be near enough to the bottom of the casing to mix it up in good shape. After we get the stuff in the bottom of the hole, we'll suspend the bit in the hole with a piece of soft rope we've soaked in oil. Then we'll lay a trailer back to the engine house. We'll fire this

and by the time it has reached the soft rope and burned it in two and let the bit drop, we will be a quarter of a mile away. I think it would be a good plan for us to be in one of the dance houses, as they are open pretty near all night. That will be all the alibi we'll want in case any one should suspect us."

Just before "Red" and Sandy came into the back room of "The Last Chance," Short Jones, "Big Jim's" tool-dresser, had come into the room and was seated at one of the back tables. In taking something out of his pocket he had dropped a coin down in the sawdust under the table, and when they came in he was down on his knees looking for it. When he heard "Red" and Sandy enter the room he recognized "Red's" voice, so he remained concealed under the table and overheard all that "Red" had said to Sandy.

The day after Shorty had heard "Red" Allen and his toolie talking in "The Last Chance" saloon, he came on tour and said: "Jim, I've got something to tell you." But as Shorty always had something to tell, Jim said: "Wait until we have eaten our supper, then I'll have more time to listen to you."

So, just after six o'clock, they had pulled out, run the bailer and changed bits, when Jim said: "We'll let the tools hang on the wrench while we eat our supper. We're so far ahead of the Miller bunch that we can afford to take it a little easier now. From the number of coils they have on the shaft, I figure we are at least three hundred feet deeper than thy are."

After they had eaten and had their pipes going, Jim said: "Now, Shorty, what was that yarn you were going to tell me?"

So Shorty told him what he had heard in the saloon. For some time Jim sat smoking, not saying a word; then, looking over at Shorty, said: "Well, Shorty, they are not going to do that—they just think they are. We'll beat them to it."

After thinking for a while, Jim said: "I'll tell you what we'll do. You get a couple of empty glycerine cans, then go down to the Oil Well Supply store and get twenty quarts of lard oil. Then on Saturday night, when the other crew is on tour, we'll go up and get those two cans of glycerine and put the two cans of oil in their place. This stuff looks so much like glycerine that they'll not know the difference. After we go off tour we'll hide in the woods near the well, and as soon as they set fire to their trail, we'll go into the derrick and take the old bit off the rope and bury it some place. It's a good thing they're going to get away as fast as they can. That makes it that much easier for us. They'll be so far away they'll not expect to hear the report of the shot. If I am not mistaken there'll be a couple of very much surprised people in Oilton on Monday when they see the old Bolton No. 3 making hole the same as ever."

On the following Tuesday morning "Red" and Sandy were in "The Last Chance" saloon, seated at the same table, but with a different bottle of whiskey.

"Well, Sandy, what do you know about the Bolton No. 3? I sent a fellow up there this morning and he tells me they were running right along and were drilling in something that was cutting like cheese. Now, what do you know about that? Didn't we go up there and put a twenty-quart shell of perfectly good blow-up stuff down to the bottom of that hole, and didn't we drop a bit right on top of that shell, and didn't that shell have a perfectly good cap on top of it? Have I been dreaming all this stuff, or have I

been drinking so much of this rot-gut whiskey that I'm getting nutty?"

"No," said Sandy, "it was no pipe dream. We put the stuff in the hole, I know that, for I was scared stiff while we were loading the shell. To be honest with you, "Red," I don't like to handle that blow-up stuff. Honest to God, "Red," I'm worried sick about this thing. If the boys about this little old burg should get wise to the fact that we tried to plug a hole, they'd chase us out of the town so fast that we wouldn't see ourselves going. I bet I drank three quarts of that rotten whiskey since Saturday night and every time anyone speaks loud or touches me, I jump about a foot. It sure has gotten on my nerves."

"Well," said "Red," "you haven't anything on me. I've been drinking that red stuff they call whiskey so fast that I have to use a water glass; a whiskey glass doesn't hold enough at one time. Then the worst of it is, what happened? Why didn't that stuff go off and blow that hole all to pieces; what became of that old bit? It surely went down the hole, and even if it hadn't put off the shot, it would have plugged the hole so bad they would have had a fishing job that would have lasted them till after we had our hole finished. It sure has got my goat."

In a few days the No. 3 Bolton was finished, and for the first twenty-four hours did better than a hundred and fifty barrels.

"Well," said "Big Jim," "it's good for a hundred a day or I am a poor guesser. From the thickness of the pay and the way she filled up after we went through the shell, she will do that or better."

As soon as the Miller people found out that the Bolton No. 3 was better than a hundred-barrel well they immediately started five derricks, every one as close to the Bolton line as possible. In some places the derricks were very near over the line. And in less than ten days they had five crews drilling. In the meantime their No. 1 well came in and was the best well in the bunch, the first twenty-four hours putting more than two hundred barrels in the tank.

"Red" felt so good about it that he tried to drink up all the whiskey in Oilton, and got so drunk that someone else had to do his work for a week. All this time Jim was not talking much, but doing a lot of thinking. He knew that if he offset every well that the Miller people were drilling it would be a losing game for both companies.

One day, while he was sitting in the boiler house trying to make up his mind what was best to do, as the rest of the company had put it up to him, old man Bolton, as he was called by almost everyone, came in.

"Well, Jim, what are you going to do? Let this Miller company take all the oil from under us, or are you going to fight them to a finish?"

"Well, Mr. Bolton," said Jim, "I have been sitting here trying to make up my mind what to do. Of course, I know just how you feel about it, for the more wells we drill on your land, the more money you get. But it looks to me as if this Miller crowd is going bug-house on drilling, and if we offset every well they have up against the line, I don't think there is any doubt but what both companies will lose money. Now, I want to do the square thing with you, but at the same time I don't want to lose money for my company or myself."

"Jim," said Mr. Bolton, "I think you are a square man, and I also think you will try to do what is right for us all. I am going to tell you something that will surprise you. No, I am not going to tell you just now. I have something to tell

you, but it will keep for a few days. How soon do you think this batch of five wells will get the pay?"

"With no bad luck," said Jim, "they ought to be through the sand, shot and cleaned out in ten or twelve days."

"As soon as those wells are put to pumping or are flowing through the casing into the tank, I have a piece of news to give you which I think will surprise you."

"Why wait for the wells to come in?" asked Jim. "What will that have to do with your story?"

But the old man just laughed and winked at Jim.

At the end of two weeks from the time Jim and Mr. Bolton were talking in the boiler house, wells No. 2, 3, 4, 5 and 6 were through the sand and were all producing oil. Three of them had enough gas and were flowing their oil through the casing. The other two were pumping. While not quite as good wells as their No. 1, they were all nice producers, making from fifty to a hundred and fifty apiece. A few days after the wells began to produce, Mr. Bolton drove up to "Big Jim's" boiler house. With him was a stranger. Mr. Bolton called to Jim to come out. As Jim walked over to where Mr. Bolton and the stranger were, Mr. Bolton said: "Mr. Johnston, I want you to meet Mr. Boyle, from Titusville. Mr. Boyle has the reputation of being one of the best surveyors in the state. I have a little job for him, and I want you to go along with me. You know I told you I thought I had a little surprise for you. I'm not sure about it yet, but this gentleman will soon let us know whether I am right or not. One day, when the Miller company were building their five rigs at one time, I went up to the northern end of the farm to have a look at them, and while standing there thinking how unfairly the Miller crowd had acted in making their locations, a conversation I had had with my grandfather came back to me. I was only a boy then and my grandfather owned the farm. Remembering this conversation, in which my grandfather spoke of the carelessness of people in locating line fences and in which he questioned the location of the line between his farm and the Miller farm, and knowing that in those days a few feet one way or the other did not make much difference when it came to building a line fence, I have made up my mind to have a line run between my farm and the Miller farm to make sure that the Miller people have a clear title to the ground on which their wells are located, and I have brought this gentleman here with his little instrument, who will tell us just how the matter stands.

While the surveyor was getting his instrument out of the buggy, Jim noticed a party of men coming up over the hill on the Miller farm. It proved to be the members of the Miller company. They had been looking over their lease, and while there held a meeting. They were so well pleased with "Red" Allen's management of the company that they had decided to raise his salary as manager of of the Miller Oil company, and while on the lease they had driven the stakes for three new locations. When the party came up to where Bolton, Jim and the stranger were talking and saw the surveyor with his instruments, "Red" laughed and asked Jim if he had to get a surveyor now to make his locations.

"No," said Jim, "this gentleman is not going to make any locations for us."

"No," said Mr. Bolton, "he is not going to make any new locations on the Bolton farm, but probably when he is through, you gentlemen might want to

engage him to make some on the Miller farm."

"Not for us," said "Red," "I'm some little locator myself, and every one I have picked along this line has been a good one."

By this time the surveyor had located the corner store and set his instrument. At first the Miller crowd laughed at him, but not for long, for in a short time he informed them that every well they had drilled was on the Bolton farm. He told them that some of the wells were almost a hundred feet over the line.

"The trouble with you people," said the surveyor, "is that you have followed that old stake and rider fence, supposing it to be the line, and every well you have drilled, commencing with your No. 1, you have gotten further on to the Bolton farm. In other words, you people have not drilled one well on the Miller farm. You have drilled, as I understand, six very nice wells for the Bolton Oil company."

All the time the surveyor was talking, "Red" Allen was backing up, and as soon as he thoroughly understood the situation, without saying a word to anyone, he made a bee line for "The Last Chance" saloon, and telling the bar tender to send in a quart of whiskey, prepared to drown his sorrow.

That night Shorty Jones wandered into the "Silver Dollar" saloon. Although it was mid-night, the saloon and the streets were crowded with drillers and tool-dressers going on and coming off tour. Shorty and three of his cronies were seated at one of the many tables in the "Silver Dollar." Shorty had just finished telling them about "Red" Allen and his toolie trying to plug the Bolton No. 3. He had promised Jim not to say a word about it, but having had a few drinks he forgot all about his promise.

After he had finished, one of the party jumped up on his chair and called out to the crowd: "Hey, fellows! come over here!"

In a minute Shorty's table was surrounded. "Now," said the man who had attracted the crowd, "tell the crowd what you just told us."

Shorty repeated his story.

"Now," said the man, still standing on his chair, "that is one thing the oil country boys will not stand for. I move that we escort those two gentlemen out of this town on a rail, and that we notify them that if they ever show themselves in this burg again we will not only ride them out on a rail, but will also give them a coat of tar and feathers. I put that as a motion." It was seconded by a dozen men in the crowd.

"Are you ready for the question? If so, all in favor vote "I." And seemingly it was voted favorable by every one in the room. "This opposed?" Silence followed. "Well, it is so ordered."

One of the crowd said, "I saw 'Red' and Sandy going up to their boarding house a few minutes ago."

The self-authorized leader told a couple of the men to get two stout rails, and soon half a hundred men were on their way. In a few minutes they had the two men out of the house and astride the rails. Shorty had found a Salvation Army base drum, and with Shorty in the lead, beating the drum, the crowd following with "Red" and Sandy, they escorted them to the edge of the town and, with a warning never to show themselves again in the town, left them.

FIGURE 3.

This shows "3 in 1" section of casing. There was a string 1440 feet long of 8¼-inch 24-lb. steel casing; the elevator let go and the string—weighing something over 34,000 lbs.—dropped 200 feet to a bottom of limestone. The three sections on the bottom were telescoped—one inside and one outside. It will be noted there was no failure in the weld—and the three lengths telescoped without a crack. The exterior apparently shows a straight length of casing. The particular piece shown was machined to show the three separate sections as telescoped.

Note the circumstances are substantially the same as Fig. 2—but the results radically different. This happened in the Ohio field.

FIGURE 4.

This shows 26 lengths of 4-inch rotary pipe—about 500 feet in length. The well was about 2000 feet deep and all of the pipe was out of the ground excepting this particular 26 lengths when the gas began to show up and blew the pipe completely out of the well—*without a sign of a break in a single joint of the twenty-six lengths.* One of the operators said that this pipe was "flexible as a giant whiplash." This happened in the Texas field.

FIGURE 5.

This shows a piece of 8-inch pipe subjected to a twisting strain of 713,000 inch-pounds. In appearance this looks almost like a piece of rubber, and yet when it is remembered that this pipe has a thickness of about one-third of an inch and weighs about 29 lbs. per foot, the enormous twisting strain can be appreciated. No sign of fracture appears in the material.

FIGURE 6.

This shows a number of pieces of pipe welded together by the autogenous welding process and then bent into the shape shown. The white or frosted effect is due to the fact that this was connected up with a refrigerating machine and all the pipe is covered with a thick frost.

FIGURE 7.

This shows a bow-knot made from pipe and is self explanatory.

These unusual pieces of pipe tend to show the inherent reserve strength of tubular material.

A few years ago it would have been impossible to secure pipe with physical properties such as shown, and these specific examples reflect the advance and improvements in metallurgical methods and practice in the manufacture of steel for pipe.

ODD CHARACTERS OF OILDOM.

BY J. A. CROSS.

PERSONS who are so different as to be called eccentric are found in every walk of life. In the nature of things they are so distributed that it would be folly to try to segregate them into one age, one race, one calling, one type of mentality or tempermentality. This truth is in full accord with nature's ways for if no two leaves are alike, why should human characters repeat; and if each has the power to diverge why should not an occasional one wiggle over the circumference of accepted standards? This is what might be expected to happen but when it does happen all eyes are turned in wonder and amazement to see the antics of the bold adventurer who has the temerity to follow his own nature, rather than the expectation of his neighbors. The people who are painfully careful to play the game of life according to standardized rules may be useful and comfortable but not conspicuous; they may be capable but not spectacular. Immense possibilities for human progress lie under the even surface of regularity, which are of little use because they are sacrificed to the crushing inertia of the present. The man who has not the courage to step out into the path of the public eye because of possible ridicule has the alternative of remaining in the ranks where his obscurity will be unassailable because he will be buried in the mass.

The fellow who is not afraid to be a "character" has always held the stage and will continue to enjoy the thrills of the spotlight until his friends of regular tastes experience a transformation of nature. That daring type of spirit, the man who knows that he is "different" and not only admits it to the world but glories in the fact is not proportionately numerous but he is found in every condition and calling, and where there are big things to be done he is ever on the job. When a new enterprise is to be launched he is first on the ground and every expanding conception is but the development of his genius. He may not be worth much in conserving the interests and institutions of society, but when a forward step is needed, he is there to negotiate it. There is a strong probability that there were suitable avenues for his active nature before the call of oildom smote his ears, but with that came a new world which he did not hesitate to explore.

Here was a field of adventure which appealed to him with singular force because he only was fitted to grasp its all but unlimited opportunities. His conservative brother was barred from this strange game by the disparity between its rugged requirements and his habits of caution. In its first wild period of chaos the stories of which read like fancies of the unreal, it seemed to reserve the biggest of its extravagant prizes for the one who could show the most irregular and apparently irresponsible qualities.

The plunger did not always make good, but it was equally true that the piker did not have a place in the proceedings at any stage. The close buyer and the careful investor had nothing in common with the giants of those days.

This does not preclude the necessity of business principles in the oil industry, but it emphasizes the necessity of the chance taking spirit and the ability to visualize anticipated rewards while they are yet problematical. Especially was this true in the unsettled days of the pioneer, but it has been somewhat modified by the more settled conditions of modern times.

It may not seem fair to classify these men of big business and large vision as odd characters but in the ultimate analysis that is about what they are. If progress were the habit of the world the shoe would be on the other foot but as it is the inertia is with the conservatives. It follows that the independent spirits who depart from the path of least resistance, choosing rather to work against odds in the cause of progress, become themselves odd in the popular view in proportion to the avoidable difficulties they voluntarily combat.

In the strictest sense the one who violates the dictates of custom is guilty of oddness but it is less costly to bear the soft impeachment than to move in a deepening rut of regularity until it becomes the grave of initiative and personal independence.

The heroes who blaze the way for the engines of progress deserve the first fruits of the earnings which their efforts produce but usually they do not get them. The oil business has been somewhat exceptional in this regard, for here the returns follow so quickly, if they follow at all, that there is little in point of time between the investment and the reward. While we admire the independent spirit that dares to brave the tremendous pressure of custom and environment, yet such does not always bring material gain to the possessor. It therefore follows that persons having neither fame nor fortune are numbered among the odd characters for the reason that their traits do not run true to type in their respective neighborhoods. While these never made their fortunes yet it is easy to infer that the courage which enabled them to pull away from community habits would have been a valuable asset in fortune building, had reasonable opportunities been presented. We will now consider the peculiarities of a few of this class who toiled among the hills of West Virginia a score of years ago.

At that time a certain man lived in a log hut beside a stream of water which ran between two hills. His name was not Sol West, but for our purpose let us assume that it might as well have been. When oil was found in his neighborhood he did not have any money, nor did he acquire any as long as he lived, yet he was a big winner because of the changed order of his surroundings. His oddity lay chiefly in the fact that he wasn't looking for money, nor did he want it, but instead he was looking for the fellowship of his kind for which he seemed to have a genuine obsession. He was about fifty and had a family; as to personal possessions there was nothing to it except a mule, a truck patch and a fiddle. If anything more was needed he never betrayed the secret. He had the parts of a southern gentleman when it came to the matter of hospitality. With his newly discovered oil friends around him, as he fiddled and told long yarns, he displayed a glow of face and a re-

siliency of spirit which one would never expect to find in any mortal who had yet one wish ungratified. The fact that his new friends regarded him as a clown, never at any time taking him seriously, did not impede the flow of Sol's spirits, especially when they were stimulated by the liquid variety. He enjoyed the action as well as the applause the new order brought him; under its stimulus his heated fancy ran amuck until he lost the last trace of truth he ever had. He didn't know the price in character value his fun was costing, but that mattered little for if he had known he would have been satisfied with the bargain as long as the excitement lasted.

One of his sons—a chip off the old blockhead—showed early signs of originality in bending the truth to meet his purpose. Having acquired the habit of borrowing a neighbor's horse, much to the latter's annoyance, his abuse of the privilege became so marked as to reach a point where tolerance was rendered difficult. It was therefore determined to withhold the loan on the next application but when this was done the boy came back with the announcement of the death of his sister, who had lived eight miles distant. With such a reason attached to the request of course the owner of the horse in a true neighborly spirit relented with suitable apologies and condolences. Again when the beast was returned did the neighbor speak regretfully of the bereavement which had been sustained, only to be petrified by the cool statement that "she's all right now, she was dead, but the doctor brought her back to life again."

Bud Dillon was another native of the hill country who was an oddity after his own way and manner. When the oil boom struck his section it seemed to put an aggressive streak in his nature which he had not known before. This was not so strange since the whole community was teeming with new energy under the powerful impulse of the live forces always identified with oil, but Bud's case was intense beyond the ordinary. He was middle aged, frail of body, with a mind now under the conviction that in the great busy world he has so recently discovered his proper sphere was to command. He began by taking a few boarders and securing a pumping job at a station near by, which netted him a handsome sum monthly, as compared to his former earnings. If he had but recognized his limitations he would have been contented, but it seemed that a taste of the bigger life so fired his soul that his future began to be painted in glowing colors with himself as artist. The intimations which he gave out occasionally showed that he was reserving a place in the front line of oil magnates against that time when he should come into his own.

For some capacities his aspirations would have been fitting, but for one of his size they were criminal. Why his possibilities were so hopelessly below his vision is a question in the philosophy of life which has upset the plans of better men than Bud. There are those who like to dream, enjoying it as an end in itself which is easier and less disappointing than to attempt an application which would change the course of events. But Bud was more practical. To him a dream was a program; unless it was carried out it was meaningless.

His ambition was not so bad in itself, but the harm lay in his ruthless methods of getting to it. His plan was to get to be a minor boss and then a bigger one and to "knock" his associates as the

surest means of eliminating rivals. He did so in a way to make his own enterprise and loyalty stand out in bold relief. Whenever a slight irregularity or a real mishap occurred in the affairs of his fellow workmen, Bud had an errand to the office of Hal Gilks, the superintendent. To a few who were wise to his game he became known as "Bud the Confessor." But somehow his plan did not prosper and as his hopes receded, the habit of confessing the faults of others became chronic, sending him down the years with an incurable grouch and in bad odor with those who would have been his friends.

Tom Watts was another character who kept store in a quiet village destined to livelier scenes because of oil invasion. He was not of nervous temperament, did not fall for the new spirit, or anything else new, determining within himself that he would stand pat along the old lines regardless of trade or prestige. With the arrival of new people and the infusion of progressive tendencies the old man's purpose was put to the test in many ways, but he stood firm, sustained by the conviction that the good old methods were superior in every respect to the new fangled notions of a generation green in experience and fresh in disposition. As the rush of the place became more marked Tom grew more deliberate in all his movements, as if bent on striking a reasonable average. His indifference to trade is shown by the following incident which occurred soon after the advent of oil. A customer came in and said:

"Mr. Watts, have you overalls for sale?"

"Yas," was the slow reply.

"Are they good and strong?"

"Don't know."

"Have you 34 x 35 size?"

"Guess so."

"Have they patent buttons?"

"Never looked to see."

"Will you show them to me?"

"Wait till I get this boy some candy."

After a long interval during which Tom's mind seemed to be in a retrospective state, the customer spoke again with a trace of irritation:

"Mr. Watts, I want to see those goods now."

"Oh, don't worry; I have to get some butter ready for Mrs. Casey first."

When Tom finally got around the prospective buyer looked over the goods and inquired as to the price. Learning that the figure was higher than that quoted by a rival store, he informed Mr. Watts of that fact, receiving this reply:

"Wall you'd better go there and buy them. Suits me all right anyway. I have to have something to keep store on."

On another occasion an affable drummer came in and introduced himself. After commenting favorably on the oil boom and its stimulating effect on the town, the drummer discovering a sore spot which that topic seemed to aggravate, tactfully turned to other subjects among them the sensational victory of Fitz over Corbett in the prize ring. Tom's reply was to the effect that fighting was no way to arrive at physical superiority but that lifting was the one reliable test. Those who knew Tom gave him due credit for sincerity in this opinion for it was well known that he himself had been able in his prime to outlift any man in all that section.

After some further experimenting, the salesman discovered that checkers was the one best bet by which to get next to the old man's heart. After the necessary

preliminaries the two were soon buried heart and soul in the throes of a titanic struggle of wits at the back end of the store. After they had run fifty-fifty for a few games, Tom became so absorbed that he didn't notice customers. Deprecating this neglect the drummer called attention to an apparent customer who had just come in. "Hush," whispered Tom, "you just keep quiet and he'll go away again pretty soon."

Flowing well in Mexico.

A LITTLE JOURNEY TO EXPOSITION PARK ON CONNEAUT LAKE

A SEPTEMBER IDYLLIC.

BY C. R. WATTSON.

"WE are strong," says Ralph Waldo Emerson, "only as we ally ourselves with Nature." We agree with Ralph—it's the spin in the open that puts vim and vigor into the daily task. We certainly ally ourselves with Nature and breathe that health-giving ozone when we automobile over the roads that traverse the everlasting hills of Western Pennsylvania.

With this in mind, ye editor and his guest, the writer, determined to burn up a few gallons of gasoline in combining pleasure with business, as we would not be guilty, under the warnings issued, of using the precious fluid for the former purposes alone.

So, with a purr of the motor, we were off on a little journey that embraced the prosperous counties of Butler, Venango, Crawford and Erie.

The first stop was made a brief one at Clintonville, a pretty little, but isolated, village occupying a high spot on the State road that leads to Franklin and other points north. Its citizens are mainly engaged in the production of $3.50 oil, and wear a pleasant smile at that. Their houses and well-kept lawns indicate thrift and good citizenship, coupled with goodfellowship, a mark of distinction to be noted in favor of the oil man, no matter where you find him.

Passing through what was once the famous Bullion oil field that created such a stir in oil circles in 1876-77 and which swerved the tide, for a brief time, that had set in for Bradford, we found little to recall its former greatness. Summit City, on the Simcox farm, which at the zenith of its existence had 2,000 inhabitants, among them the renowned Ben Hogan; Beringer City, on the Beringer farm, and Dean City, on the McCalmont farm, have long since, like Pithole and other up-to-the-Creek famous towns, passed into oblivion and are only recalled by those in the evening of life or the reader of oil history.

From this point we proceeded on to Franklin, through scenery of unsurpassing beauty. As we pass down the precipitous road that leads to Big Sandy creek, one is struck by the sublimity of the scene that enfolds itself on both sides of this diminutive stream, but which at one time must have been a gorge for the passageway of mighty waters. Here and there could be seen in the undulating foliage the handiwork of Jack Frost, done in his most artistic embellishment, turning the leaves into most beautiful colors that no brush could do justice to. The sun is setting in an explosion of yellow and this decorated foliage reflects its rays in a most gorgeous picture.

As we start to ascend the equally steep hill on the opposite side of the creek we get a warning from our engine that is unmistakable, and find that, through our absorption in the scenic environment of the day and the 45 degree position of the car, we are out of gas. However, a hur-

ried shift to the reserve and we were again on our way, and shortly afterwards entered the streets of historic Franklin. This city has many points of interest. It is the home of the Galena-Signal Oil Company, noted for its Galena Lubricants. Wherever a steam or electric railway is being operated, there you will find the Galena-Signal performing its part in the operation and preservation of its machinery. President Charles Miller stands out boldly as not only the father of this great plant, but as a great benefactor to the city of Franklin. He has not only been a leading spirit in his own town, but in the State and Nation. His life's work has been so multiplex in good works that it would require pages to merely name them.

After a good night's refreshing slumber in the well-kept Park hotel, we resume our journey and soon Oil City is added to our list. This city shows great progress since the last visit of the writer—some 29 years ago. Prosperity shines forth from every quarter. Our stay is brief, but the hour consumed was well occupied in the greeting of old-time friends.

We point our machine in the direction of Conneaut Lake and where, without incident, we arrive late in the afternoon.

We learn that Friend Holcomb has gone to Erie but will return the next day. Fortunately, Andy Jones, chef and all-around utility man, was still on the job in the Hotel Conneaut, busily engaged in putting up a matter of a thousand or so gallons of beets and tomatoes. Andy's greeting was of the spontaneous kind, frequently remarking that he "shuly was powerful glad to see you all." His biscuits and corn pone, true Southern style, could not be improved upon, and we did justice to them.

Exposition Park, on Conneaut Lake, is one of the most popular resorts for those living in Western Pennsylvania and Eastern Ohio. Each succeeding year sees it made the rendezvous of old friends who have experienced its comforts, its cheerfulness, its unique associations, its restfulness and hospitality. As we stepped out onto the campus that lovely September evening, the walks edged with shrubbery and flowers blooming in all their glory, we almost imagined they were nodding to us in recognition as old acquaintances. One is led to exclaim, "how strange it is that all this exquisite beauty should be left to die in solitude, with only a few old stand-bys like 'Uncle' Dan Williams and James McKeown, left-overs of the season, to realize and appreciate the delightful, idyllic, sylvian scenes that encircle this Queen of Lakes under the rays of a September and October sun.

We seek a sequestered spot at the boat landing, where crowds were wont to gather in season, but now entirely deserted. We look out over the expanse of water that always delights the eye. There is a strange quietness prevailing, not a sound is heard. A slight white mist is beginning to settle over the lake, through which may be seen scintillating lights from Oakland Beach; now there is a fish of goodly size which flops out of the water for a second, displaying a stretch of silver. We move out on the pier and find a couple, man and woman, fishing. "What luck?" we inquire. The former points to two small fishes lying near, with the laconic information, "She caught them." We examine the catch and find they belong to the cat fish family, but these must have only recently graduated from the nursery and are hardly entitled to the full appellation of "cat." We, however, have always had

a great regard for little fishes after reading about how, in the long ago, they played such an important part in helping to feed 4,000 hungry people.

The next morning Henry O. Holcomb, president of the Conneaut Lake Company, and responsible in a great measure for bringing this delightful Exposition Park from a one-day resort up to its present high pinacle of perfection, arrived home. He gave us the tropical mitt and the gladsome grin that usually perambulates over his expansive countenance. The intricacies and the perplexities that constantly disturb the equilibrium of the manager of a hotel and summer resort slips from this man's epidermis like water from a duck's back.

Our stay at the Lake included a trip out to the Holcomb farm. If I were to try to enumerate the different kinds of vegetables, and the quantity raised, as given me off hand, I am afraid I would be considered as getting in shape to become a member of the Aninias club.

This farm is a credit and educator to the neighborhood in which it is located. It furnished Hotel Conneaut with fresh vegetables every day during the past seasons, and yet, like the "loaves and fishes," there was gathered up great quantities to be canned for the winter. In addition to this there were 2,500 chickens, gathered like a white cloud, for our inspection, and no doubt congratulating themselves at having escaped the broiler. These will furnish fresh eggs for next season. Thus is seen Hen's efficiency. (Joke.)

The one great feature Conneaut Lake will have to offer to its visitors next season is a golf ground that for beauty and landscape is not surpassed by any in Western Pennsylvania. The grounds consist of 150 acres, which stretches out before the eye like a soft velvety carpet of green. A small rivulet percolates zig-zag through the center of the entire grounds and forms a natural hazard to the player. This little streamlet is fringed on each bank with low shrubbery which enhances the scenery and at the same time is hard on the one who makes a "slice." The development of this ground has already cost $10,000. This is an attraction, a golf course, that has been the desire of Mr. Holcomb for several years, and it is with enthusiasm and pardonable pride that he conducts visitors to the grounds and points out what has been accomplished in so short a time, one year since work was begun.

With this attraction and the health-giving qualities that the atmosphere possesses floating from the waters of Conneaut, it is safe to predict that it will not be long until September, October and even November will be popular months at this resort, and the Hotel Conneaut will remain open with all its gaiety and prestige of the month of August.

In conclusion it would be a great pleasure to be able to say that our trip was made over roads of velvety smoothness, but, Terese, that would again entitle me to a membership in the Ananias club and, being a lover of truth, I am compelled to say that Utopia has not been reached in the way of good roads, especially in Western Pennsylvania and, I opine, never will be as long as we are subject to the present political regime.

These State roads grow worse with each year. This year they are not as good as they were last year, and last year not as good as the previous year, and so on back.

There is only one permanent material for road building, which will eventually be adopted when the counties get the full use of the money paid in for automobile licenses, and that is the brick road.

THE OIL SITUATION IN ITS RELATION TO WAR NEEDS

BY VAN H. MANNING, Director of the Bureau of Mines.

ANY way that can be pointed out for providing the supplies of petroleum, so essential to the successful prosecution of this war, requires materials from the steel industry, and if these supplies are not forthcoming, our petroleum needs can not be secured.

The situation is critical, for the operators find themselves unable to obtain adequate supplies for the drilling of oil wells. If they are unable to drill new wells, our present production can not be maintained, much less be increased, for, as it well known, oil wells do not maintain a constant production, but show a steady diminution from the time they are first completed. Were no wells to be drilled for one year's time, our petroleum production would drop by at least one-fourth.

At the preset time drilling is being curtailed because of the difficulty in obtaining supplies. Not only have the costs of oil well supplies been increased, but it has become impossible to get them in adequate quanities for any price, and the situation is now worse than at any time since the war in Europe started. Perhaps the situation of the producer is best illustrated by the fact that from California to the fields of Pennsylvania the small producing wells are being abandoned in order to use the casing and other equipment of these wells in new wells from which larger productions are expected, thus, wells still capable of small profitable productions are being permanently abandoned in the desperate search for well-drilling materials.

In my opinion it is imperative that the oil well supply industry be placed on the favored lists and permitted to manufacture sufficient supplies for the oil producers in order that our military and industrial needs for gasoline and other petroleum products be assured. The Bureau of Mines has called this situation to the attention of the Council of National Defense and it is hoped that arrangements will be made whereby adequate supplies can be assured the producer in future, but it also becomes my part to urge care on the part of the producer in the use of materials and to point out ways whereby casing and other supplies can be made to drill more wells than heretofore.

For saving casing I desire to call attention to a method long advocated by the engineers of this bureau. I refer to the use of mud laden fluid in the drilling of oil wells, on which method the Bureau of Mines has published Bulletin 134, obtainable free of charge from the Washington office. By this method of well drilling less casing is necessary and by intelligent application of the methods outlined in Bulletin 134 the same amount of casing can be made to supply a greater number of wells. This is a method

that has long been in use in Texas, Louisiana and California in connection with the rotary and circulator drilling system, and in the wells drilled by these methods less casing is necessary than in other fields. During the last few years the use of mud-laden fluid has been demonstrated to be entirely feasible in wells drilled by the standard tool system in the oil fields of the Mid-Continent district and further east, and that it possesses desirable features not to be overlooked by the operator.

Now, when casing is so hard to obtain and prices are so high, the saving that can be effected by this method becomes of prime importance. I am reliably informed that one of the largest operating companies of the Mid-Continent district is using this method to big advantage and that it contemplates exchanging its stocks of larger casing which it expects to save, for casings of smaller sizes. I have also been informed that the mud-laden fluid method is being used in Kentucky with the same end in view. Because of the increased costs of casing it will be found profitable where before this method was not considered necessary. I have noticed, however, that with comparatively few exceptions this fact has not been appreciated. Under the present circumstances it becomes not only an economic necessity, but a patriotic duty for the oil producer to investigate every means that holds promise of reducing the demands that must be made on the steel industry.

It is not necessary for me to detail methods by which the mud laden fluid can be used to save casing, for the subject has been covered in Bulletin 134, but engineers have observed that frequently the process has been employed in a most careless manner and without the operator having taken the slightest pains to inform himself carefuly on the process. Failure to observe the few simple but essential tests and precautions has resulted in much trouble to those who would not avail themselves of the information that could readily be obtained. I wish to emphasize to those who contemplate using this process to inform themselves fully in advance by careful study of Bulletin 134 and by consulting, if possible, someone experienced in the process. The Bureau of Mines maintains a staff of engineers and practical drillers who have made a special study of this process and I will gladly see that an expert is sent to consult with the operators in any district who show themselves sufficietly interested.

THE LIBERTY LOAN.

BY W. G. McADOO, Secretary of the Treasury.

For the purpose of equipping with arms, clothing and food our gallant soldiers who have been called to the field;

Maintaining our navy and our valiant tars upon the high seas;

Providing the necessary means to pay the wages of our soldiers and sailors, and, if the bill now pending in the Congress passes, the monthly allowances for the support of their dependent families and to supply them with life insurance;

Constructing a great fleet of merchant vessels to maintain the line of communication with our brave troops in France, and to keep our commerce afloat upon the high seas in defiance of the German Kaiser and his submarines;

Creating a great fleet of aeroplanes, which will give complete supremacy in the air to the United States and the brave nations fighting with us against the German military menace; and for other necessary war purposes,

The Congress of the United States has authorized the Secretary of the Treasury to sell to the American people bonds of the United States bearing four per cent interest, with valuable tax exemptions, and convertible under certain conditions into other issues of United States bonds that may be authorized by the Congress. The official circular of the Treasury Department gives full details.

There is now offered to the American people a new issue of $3,000,000,000 of bonds to be known as the Second Liberty Loan. They will be issued in such denominations and upon such terms that every patriotic citizen will have an opportunity to assist the Government by lending his money upon the security of a United States Government bond.

It is essential to the success of the war and to the support of our gallant troops that these loans shall not only be subscribed, but over-subscribed. No one is asked to donate or give his money to the Government; but everyone is asked to lend his money to the Government. The loans will be repaid in full with interest at the rate of four per cent per annum. A Government bond is the safest investment in the world; it is as good as currency and yet better, because the Government bond bears interest and currency does not. No other investment compares with it for safety, ready convertibility into cash, and unquestioned availability as collateral security for loans in any bank in the Unitd States.

People by thousands ask the Treasury constantly how they can help the Government in this war. Through the purchase of Liberty Bonds every one can help. No more patriotic duty can be performed by those who cannot actually fight upon the field of battle than to furnish the Government with the necessary money to enable it to give our brave soldiers and sailors all that they require to make them strong for the fight and capable of winning a swift victory over our enemies.

We fight, first of all, for America's vital rights, the right to the unmolested and unobstructed use of the high seas,

so that the surplus products of our farms, our mines and our factories may be carried into the harbors of every friendly nation in the world. Our welfare and prosperity as a people depend upon our right of peaceful intercourse with all the nations of the earth. To abandon these rights by withdrawing our ships and commerce from the seas upon the order of a military despot in Europe would destroy prosperity and bring disaster and humiliation upon the American people.

We fight to protect our citizens against assassination and murder upon the high seas while in the peaceful exercise of those rights demanded by international law and every instinct and dictate of humanity.

We fight to preserve our democratic institutions and our sovereignty as a nation against the menace of a powerful and ruthless military autocracy headed by the German Kaiser, whose ambition is to dominate the world.

We fight also for the noble ideal of universal democracy and liberty, the right of the smallest and weakest nations equally with the most powerful to live and to govern themselves according to the will of their own people.

We fight for peace, for that just and lasting peace which agonized and tortured humanity craves and which not the sword nor the bayonet of a military despot but the supremacy of vindicated right alone can restore to a distracted world.

To secure these ends I appeal to every man and woman who resides upon the soil of free America and enjoys the blessings of her priceless institutions to join the League of Patriots by purchasing a Liberty Bond.

The Automobile Industry's Birthday.

The Winton Company invites suggestions for an appropriate way to commemorate the twentieth anniversary of the founding of the automobile industry in America. April 1, 1898, the Winton Company began delivery of the first regular output of American-made cars.

The 1898 output was 21 cars. This was increased in 1899 to 102 cars, of which 11 were light trucks. Of the two years' output, New York bought 32, Pensylvania 32, New Jersey 11, Ohio 9, Connecticut 7, Illinois 6, Ontario 5, Indiana 4, Massachusetts 3, scattering 14.

Numbered among the 123 pioneer purchasers were Wm. Rockefeller, Harry Payne Whitney, Lawrence Waterbury, Larz Anderson, J. W. Packard, J. M. Studebaker, Henry Rogers Winthrop, C. Gray Dinsmore, Geo. W. Childs Drexel, Albert C. Bostwick, Josiah Stanford and H. K. Browning.

The automobile is now so tremendous a factor in American life that a fitting celebration of its approach to voting age is certainly to be desired. Just what would be appropriate is for some reader to suggest.

Thrilling Experience of a Goodyear Tire and Rubber Company Manager

Shipwrecked on a south sea island, 6,000 miles from San Francisco! This was the experience of Howard Hunter, managing director of the Goodyear Tire & Rubber Company, of Australasia, who has just arrived at the Goodyear factory at Akron, Ohio, from that land of rabbits, kangaroos and prize fighters. He will return to Australia when the conferences which brought him here have closed, but declares that on his return trip he will pick out the largest ship that plies the Pacific ocean, for he blames the exciting events of his last voyage to his booking passage on a tramp steamer, instead of waiting for a regular liner.

Everything went well, he explains, until his ship, the Maitai, approached a small coral island—dotted with cocoanut trees—where the ship had lost an anchor on another trip, when a sudden squall sprang up and forced the steamer to seek safety in the open seas.

Naturally, the interest of all aboard was awakened as the ship backed hither and thither, combing the sea for the lost anchor. Then something happened. The decks shivered and a crunching crash announced that they were on the rocks. The ship listed badly and began to sink rapidly. An S. O. S. was flashed over the water, but the rat-a-tat-tat of the wireless soon ceased, and the operator's appearance on the deck in dripping clothes announced that the wireless room was flooded.

Life boats were quickly lowered, but had hardly splashed into the rolling sea when a small fleet of launches and native canoes appeared on the port side of the vessel. In a short time the ship was deserted and passengers and crew were soon busy drying off in the fishing huts on the shore. Tidings of the shipwreck soon passed around the island and the natives came from all directions to assist in the salvage of the ship's cargo.

Not a minute was lost in putting them to work, as it was feared that a sudden storm might break up the ill-fated ship and scatter the cargo over miles of sea bottom. So both natives and crew toiled the entire night.

One of the first of the passengers to rise was Hunter, who fortunately had his camera with him, and secured a photograph of the stranded ship. He discovered that the first goods to be taken from the doomed steamer consisted of a large shipment of Goodyear tires intended for New Zealand.

The expected storm broke the next day, after 400 tons of cargo had been landed safely on shore, and soon tore the Maitai to pieces, scattering the skeleton along the reef, where it took its place with the bones of a dozen other vessels whose careers had been terminated in a similar manner.

But there was not enough food on the island to maintain the marooned party, so, to stave off starvation, a start was made for New Zealand in a small fishing smack, which was so overcrowded that Hunter was forced to sleep on the deck for five nights, until the boat docked safely at Auckland.

A trip by rail and an uneventful voyage by boat finally brought him to his destination, having undergone an unique experience, fraught with all the thrills of ocean travel in the submarine zones, except actual sight of the conning tower and the wake of the torpedo.

NECROLOGY.

WILLIAM J. YOUNG—W. J. Young, aged 72, pioneer oil man, died suddenly in New York City on September 23rd, from acute indigestion.

Mr. Young became identified with the oil business shortly after making his home in Oil City, Pa., in 1862. For several years he and the late J. J. Vandergrift were associated in the producing of oil, they having organized the Forest Oil Co., which was afterwards sold to the Standard interests. Mr. Young remained as chairman of the company and it is in this capacity that he was best known throughout the Pennsylvania oil fields.

Mr. Young was a member of the Masonic fraternity and one of the original members of the Oil City Greys, a famous organization.

He married on November 5, 1866, Miss Rose E. Morrow, who, with two daughters, Mrs. Agnes Pierce, wife of Lieut. Col. Palmer Pierce, U. S. A., and Miss Katherine Young, survive him. He is also survived by a brother, L. W. Young, and two sisters, Mrs. Kingan and Miss Frances Young.

JASPER S. FISHER—Jasper Strohecker Fisher died at his home in Bradford, Pa., at 9:50 p. m. Wednesday, September 19. He was born September 8, 1836, in Lewisburg, Pa. His education was received in the public schools and at a private academy. For a brief period he was engaged as a clerk in a shoe store at Atlanta, Ga., but in 1865 he came north and located at Titusville as a clerk for the Oil Creek railroad, later becoming its station agent.

In 1866 he resigned to enter upon a short business engagement at Pithole, but later in the same year went to Petroleum Center, where he became identified with the firm of Norris & Co., oil producers and manufacturers of drilling tools. For many years thereafter he was a well-known figure in the sale of tools, machinery and producers' hardware. One year in the 70's was spent in Butler county and in 1876 he became associated with Howe & Cook, general oil well supply dealers at Tarport. Later he conducted a similar establishment at Knapps Creek, of which he was the proprietor. When the developments in that vicinity were practically complete he established the store in Bradford now owned by W. H. Griffith.

JOHN C. BOLDEN—John Calvin Bolden, aged 71, a Butler County, Pa., pioneer oil man, was instantly killed on Wednesday evening, October 10, by being struck by a south-bound train on the Bessemer & Lake Erie railroad at the Three Degree road crossing, north of Renfrew, Pa. Mr. Bolden had worked all day at a new home he was building at Nixon Station, on the "Short Line" interurban railroad. He took a car on this line to go home and was walking on the Bessemer track to reach his home, when run down. He was a member of the First Presbyterian church, Butler, Pa., and leave a wife, one son and five daughters.

JOSIAH S. BARNES—Josiah H. Barnes, aged 43, formerly of Mercer township, Butler County, Pa., died October 7, 1917, at Bartlesville, Oklahoma, of heart trouble. He was an oil man and leaves a wife, nee Mamie Perry, and four children.

Mount Rainier, Washington, from Puyallup River Valley. Photo by Ansel Adams.

THE PETROLEUM OUTLOOK

Some Fear That the Government Will Attempt Price-Fixing. Such Action Would Prove A Handicap to the Oil Industry.

THE main question in petroleum circles at the present writing is "What does the Government intend to do with the oil industry in the matter of price-fixing?" The Commission is reported to have been at work on the oil problem for several weeks, and their report is expected to be forthcoming before many days more pass into time.

We look upon their probable conclusion in a philosophical and hopeful manner, confident that nothing will be done detrimental to the trade, for the simple reason the Government cannot get along without the complete co-operation of the oil producers, which it would not have if any attempt at placing the market for crude oil any lower than the prices now prevailing.

It appears, however, that the fear of the Government taking a hand in naming the price for oil has caused the market price to remain unchanged for two months, although conditions as now prevail under the laws of supply and demand would call for a further advance in all grades of oil. In addition to this, all material necessary in the drilling and operating of oil wells has continued to advance, making the drilling of wells in small well territory almost prohibitive.

With the whole world calling for oil, and the demands of the Government and its allies growing with each day, it would seem to the writer to be the heighth of folly to fix a price for crude oil. What is needed now is help from the Government in every way possible looking to the increase of the oil output. This can be done by providing some means whereby producers can be supplied with material to carry on their operations. Only a few days ago the English Government asked for 2,500,000 barrels more of fuel oil per month to supply their destroyers with fuel. The demand for gasoline and other by-products by next Spring, with the completion by this Government of thousands of aeroplanes and many motor boats, destroyers, etc., will be enormous and require all the energetic work possible in pushing the drill to meet the requirements. From now on the drilling will gradually decline on account of bad roads and weather conditions. There will probably be some decline in the use of gasoline for automobiles, due to the same reasons, but this will be more than offset by the consumption of gasoline for other purposes, and then when the automobiles by the thousands get into commission again with good roads next summer, there will be another drain of this volatile fluid. The solution of the whole matter is to leave the oil business alone and let it work out its own course by being regulated by that old law that seldom is wrong—supply and demand.

The Record *of* Byers Drill Pipe

In the Houston district one operator, using Byers drill pipe for the first time, has used one string of it for drilling fourteen wells, each from 2500 to 3000 feet deep, without a single failure so far. From every part of the oil ano gas fields similar records are scored with

BYERS GENUINE WROUGHT IRON PIPE

FULL WEIGHT GUARANTEED

The NAME and YEAR is rolled in every length

Genuine Wrought Iron
Drill Pipe
Casing
Tubing
Line Pipe
Drive Pipe

The reason lies, first, in the nature of the iron used in all Byers tubular goods. This iron is produced under Byers control from ore mines to the finished product, and is hand puddled and rolled into skelp without the addition of scrap of any kind.

The resulting iron is tough and fibrous, the fibre giving to the pipe its wonderful resistance to vibratory and torsional stresses which so quickly cause crystallization and fracture of other pipe.

Secondly, the Byers practice of finishing the pipe insures welds which are as strong as the metal itself, and joints especially designed to withstand the severest physical stresses.

Where corrosion is a factor, as with casing, line pipe and tubing, Byers pipe possesses all the advantages which have made the old time iron famous for its rust resistance.

A. M. BYERS COMPANY
ESTABLISHED 1864
PITTSBURGH, PA.

NEW YORK CHICAGO BOSTON
LOS ANGELES HOUSTON

some in new production, although a great effort was made, which is shown by an exceptionally long list of dry holes.

Taking the fields all in all for the past three months and considering the great efforts being made and the tremendous amount of money being expended, the results have been only such as to just about offset the decline in the old wells. One is inclined to reflect on what the situation would be in the oil business if this war should hold out for two more years.

The following comparative summary of crude petroleum movement in August, 1917, represents the operations of 155 pipe line and refining companies that handle or receive oil direct from the productive fields east of the Rocky Mountains, and is compiled from reports by the United States Geological Survey, Department of the Interior, prior to noon of September 26, 1917.

This compilation includes statements filed by 38 companies operating in the Appalachian field, 10 companies operating in the Lima-Indiana field, 6 companies operating in the Illinois field, 70 companies operating in the Oklahoma,Kansas field, 12 companies operating in the Central and North Texas field, 6 companies operating in the North Louisiana field, 7 companies operating in the Gulf Coast field, and 6 companies operating in the Rocky Mountain field.

Crude Petroleum Moved from Field Sources.

Barrels of 42 gallons each.

Field—	Aug. 1917.	Aug. 1916
Appalachian	2,126,404	1,949,958
Lima-Indiana	292,292	312,520
Illinois	1,373,587	1,559,637
Oklahoma-Kansas	12,657,123	9,224,064
Central and North Texas	1,011,586	849,306
North Louisiana	851,518	925,743
Gulf Coast	1,712,795	1,196,828
Rocky Mountain	758,140	619,919

Crude Petroleum Delivered to Refineries or Consumers.

Barrels of 42 gallons each.

Field—	Aug. 1917.	Aug. 1916
Appalachian	2,064,377	2,104,819
Lima-Indiana	337,799	194,905
Illinois	1,731,755	1,810,210
Oklahoma-Kansas	12,629,756	10,762,506
Central & North Texas	960,322	1,318,273
North Louisiana	861,660	1,010,492
Gulf Coast	2,357,228	1,405,206
Rocky Mountain	811,796	490,108

Stocks of Crude Petroleum at End of Month.

Barrels of 42 gallons each.

Field—	Aug. 1917.	Aug. 1916
Appalachian	4,366,178	4,337,193
Lima-Indiana	2,171,119	2,483,681
Illinois	3,927,285	7,464,016
Oklahoma-Kansas	100,547,961	99,248,762
Central & North Texas	3,006,649	5,063,665
North Louisiana	3,671,940	4,498,148
Gulf Coast	7,692,649	8,731,032
Rocky Mountain	636,590	691,883

NOTE 1. Statistics of petroleum movement in California are not included in this tabulation because of delays incident to procuring first-hand data.

NOTE 2. The foregoing tabulation differs from preceding summaries of this series in that the statistics of deliveries to trade are computed from those of oil moved from field sources and of stocks, instead of being compiled directly from the reports of co-operating companies; and the statistics of stocks are arranged by grade of oil involved, instead of by geographic position, Mid-Continent oil held by Eastern pipe line companies, for example, being tabulated with similar oil held in Oklahoma and Kansas, instead of with Appalachian stocks, as in preceding summaries.

The principal feature of the August summary is the evidence it furnishes of gratifying increase in production of petroleum in all fields except North Louisiana, the gain noted being sufficient to slightly more than offset consumption and to permit small additions to stocks of Appalachian, of Oklahoma-Kansas, and of Central and North Texas oil, though insufficient to obviate small drafts on stocks of other grades of oil.

Stocks of Appalachian and of Mid-Continent oil were slightly larger at the

end of August, 1917, than at the end of August, 1916, but stocks of other grades of oil were appreciably less than a year ago.

There was no change in quotations for various grades of oil during the month of September.

The crude advances for August were as follows :

Aug. 1—Healdton and Corsicana 10c.

Aug. 3—Sinclair Co. advanced Kansas 15c.

Aug. 7—Healdton 10c, Corsicana 5c.

Aug. 13—Pennsylvania advanced 15c, Corning, Cabell, Somerset each 10c.

Aug. 15—Kansas and Oklahoma 20c by the Prairie Co. Price being met by other purchasers $1.90. Corsicana heavy advanced 5c, Healdton 10c. North Texas grades advanced to a $1.90 basis. The Ohio Oil Co. advanced Central West grades 10c, taking in Lima, Princeton, Illinois, Wooster and Indiana.

Aug. 18—Mid-Continent advanced 10c to $2.00.

Aug. 20—Pennsylvania grade advanced 25c to $3.50; Corning 10c to $2.60; Cabell 10c to $2.75; Somerset (Kentucky) 10c to $2.40. The Magnolia Petroleum advanced North Texas grades to $2.00. Healdton to $1.20. Canada crude 20c, making it $2.48 per barrel.

A strange feature of the advances made in crude oil is there has been no corresponding advance in refined oil; neither has there been any general advance in gasoline. In some local sections the market has been moved up, but there has been no concerted movement on the part of the refineries to push the price of gasoline up. One reason for this may be due to the falling off of exports, which show a decrease in August over July and June of about 50 per cent. This loss in exports must be represented in an increased stock of gasoline held by the refiners.

Another important thing has developed and that is the parity between gasoline and kerosene is rapidly disappearing. This is due to the cracking process by which good gasoline is made to run cars on 50 gravity.

The shortage of gasoline and prohibitive prices that so many users of automobiles were fearing seems now to be laid to rest indefinitely. Recent developments have even made possible the extraction of gasoline from the lowest grades of oil. It is said that California and Mexican crude before long will be furnishing a fair percentage of motor fuel, which, in view of Mexico's enormous possibilities in the way of crude production, would have the effect of keeping the price of gasoline to normal figures, and at the same time furnish the Government and its allies with all the gasoline and fuel oil it requires.

Changes in the Price of Oil

The following table, furnished by W. C. Coles & Co., 61 Broadway, New York, N. Y., gives the highest and lowest price paid for Pennsylvania grade oil each year, since 1860:

Year	Highest	Lowest	Year	Highest	Lowest
1860	$20 00	$ 2 00	1889	1 12½	79½
1861	1 75	10	1890	1 07⅞	60¾
1862	2 00	10	1891	81⅝	50
1863	4 00	2 00	1892	64¼	50
1864	14 00	3 75	1893	80	62⅞
1865	10 00	4 00	1894	95¾	78½
1866	5 00	1 65	1895	2 69	94½
1867	4 00	1 50	1896	1 50	90
1868	5 50	1 80	1897	96	65
1869	7 00	4 25	1898	1 19	65
1870	4 90	2 75	1899	1 66	1 13
1871	5 15	3 40	1900	1 68	1 05
1872	4 10	3 00	1901	1 30	1 05
1873	3 05	1 00	1902	1 54	1 15
1874	1 90	45	1903	1 90	1 50
1875	1 65	90	1904	1 85	1 50
1876	4 23½	1 48¾	1905	1 61	1 27
1877	3 70	1 53¾	1906	1 64	1 58
1878	1 87½	78¾	1907	1 78	1 58
1879	1 28¾	63½	1908	1 78	1 78
1880	1 24⅝	71¼	1909	1 78	1 43
1881	1 01¼	72½	1910	1 43	1 30
1882	1 35	49¼	1911	1 35	1 35
1883	1 24¾	83¼	1912	2 00	1 30
1884	1 15⅝	51¼	1913	2 50	2 00
1885	1 12⅝	68	1914	2 50	1 45
1886	92¼	60	1915	2 25	1 35
1887	$ 90	$ 54	1916	2 60	2 25
1888	1 00	71⅝	1917	3 50	2 85

Notice to Our Subscribers

This Magazine is published in January, April, July and October of each year.

It is intended, especially, as a book for reference in all matters concerning the Oil and Gas business, and we are glad to receive items from friends regarding the same.

The attention of the advertising public is called to the particular advantages our Magazine possesses as a medium between them and the general public, combining, as we do, the romance of the business with the sterner, drier facts and figures which necessarily go with it.

If you like the Magazine, speak to your friends about it; if you have any criticisms to offer, or improvement to suggest, call our attention to them. Each number will be complete in itself. Our usual high standard will be maintained.

Copies of this Magazine may be found on file in the British Museum in London, England, and the New York Public Library, 42nd St. and 5th Ave., New York City.

The price to subscribers is $1.00 for two years; single copies, 15c. Foreign subscribers will add, for Canada 24c, and for all other countries 40c for postage.

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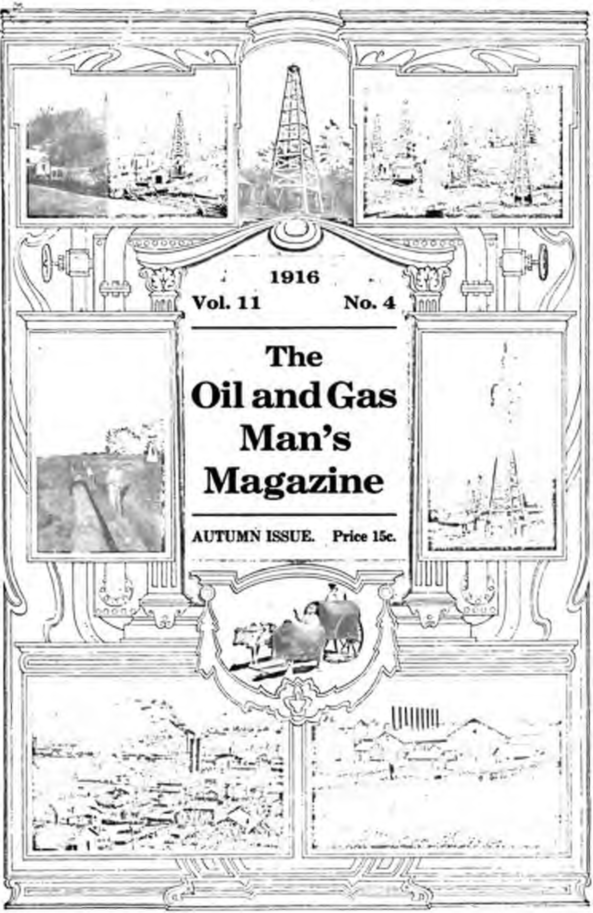

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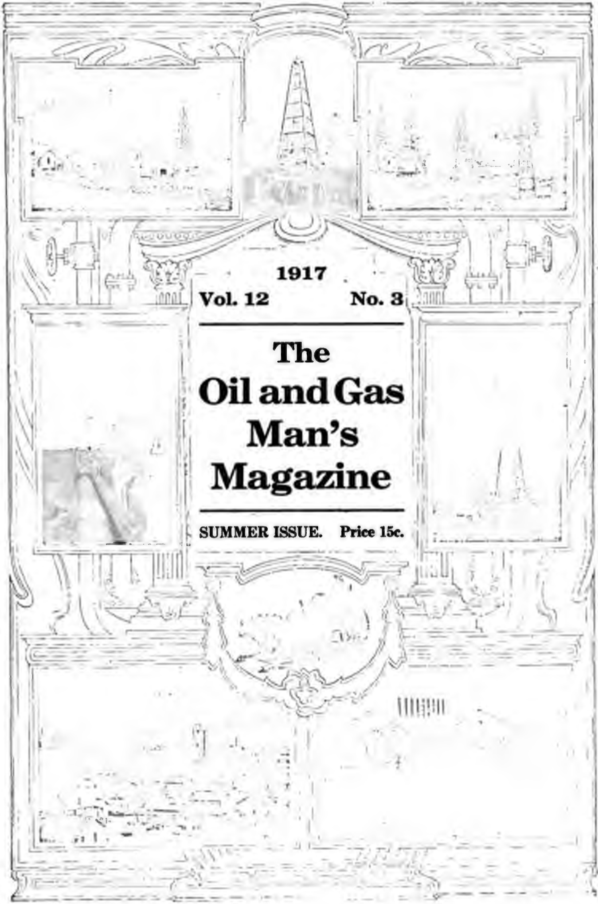

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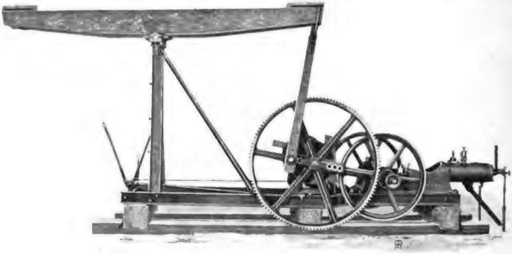

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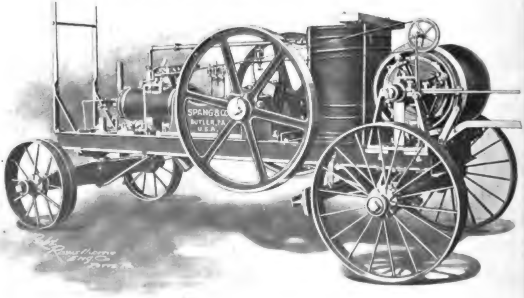

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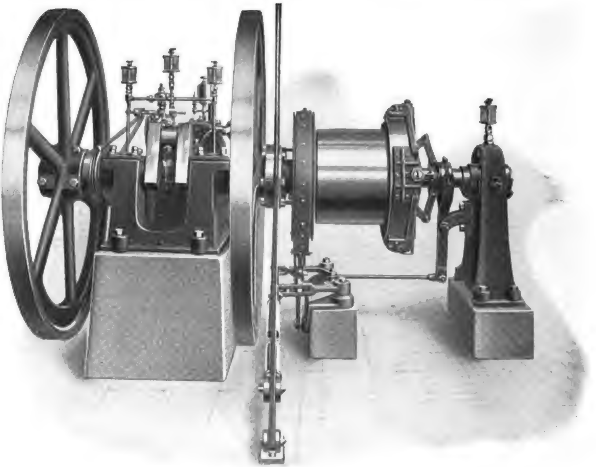

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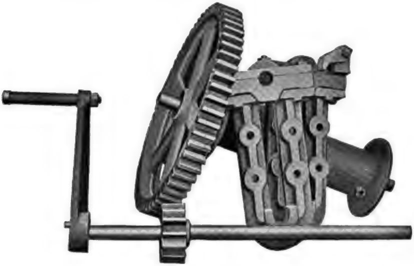

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